

10/643, sss

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptal204bxd

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\* \* \* \* \* Welcome to STN International \* \* \* \* \*

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America  
NEWS 2 "Ask CAS" for self-help around the clock  
NEWS 3 Jul 12 BELLSTEIN enhanced with new display and select options,  
resulting in a closer connection to BABS  
NEWS 4 AUG 02 IFIPAT/IFIUDB/IFICDB reloaded with new search and display  
fields  
NEWS 5 AUG 02 CAPLUS and CA patent records enhanced with European and Japan  
Patent Office Classifications  
NEWS 6 AUG 02 The Analysis Edition of STN Express with Discover!  
(Version 7.01 for Windows) now available  
NEWS 7 AUG 27 BIOCOMMERCE: Changes and enhancements to content coverage  
NEWS 8 AUG 27 BIOTECHABS/BIOTECHDS: Two new display fields added for legal  
status data from INPADOC  
NEWS 9 SEP 01 INPADOC: New family current-awareness alert (SDI) available  
NEWS 10 SEP 01 New pricing for the Save Answers for SciFinder Wizard within  
STN Express with Discover!  
NEWS 11 SEP 01 New display format, HITSTR, available in WPIDS/WPINDEX/WPIX  
NEWS 12 SEP 14 STN Patent Forum to be held October 13, 2004, in Iselin, NJ  
NEWS 13 SEP 27 STANDARDS will no longer be available on STN  
NEWS 14 SEP 27 SWETSCAN will no longer be available on STN  
NEWS 15 SEP 30 STN downtime scheduled October 2-3, 2004  
  
NEWS EXPRESS JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004  
NEWS HOURS STN Operating Hours Plus Help Desk Availability  
NEWS INTER General Internet Information  
NEWS LOGIN Welcome Banner and News Items  
NEWS PHONE Direct Dial and Telecommunication Network Access to STN  
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that  
specific topic.

All use of STN is subject to the provisions of the STN Customer  
agreement. Please note that this agreement limits use to scientific  
research. Use for software development or design or implementation  
of commercial gateways or other similar uses is prohibited and may  
result in loss of user privileges and other penalties.

\* \* \* \* \* STN Columbus \* \* \* \* \*

FILE 'HOME' ENTERED AT 18:20:43 ON 30 SEP 2004

=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

FULL ESTIMATED COST

ENTRY      SESSION  
0.21        0.21

FILE 'REGISTRY' ENTERED AT 18:20:51 ON 30 SEP 2004  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 29 SEP 2004 HIGHEST RN 754169-63-6  
DICTIONARY FILE UPDATES: 29 SEP 2004 HIGHEST RN 754169-63-6

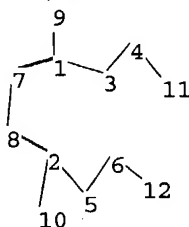
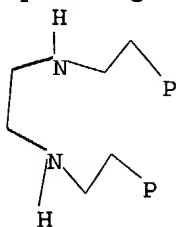
TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
information enter HELP PROP at an arrow prompt in the file or refer  
to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>  
Uploading C:\Program Files\Stnexp\Queries\10643855.str



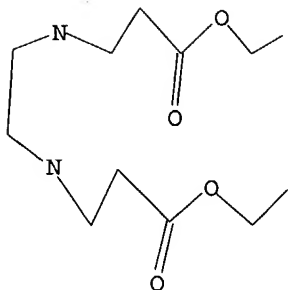
chain nodes :  
1 2 3 4 5 6 7 8 9 10 11 12  
chain bonds :  
1-3 1-7 1-9 2-5 2-8 2-10 3-4 4-11 5-6 6-12 7-8  
exact/norm bonds :  
1-3 1-7 2-5 2-8  
exact bonds :  
1-9 2-10 3-4 4-11 5-6 6-12 7-8

Match level :  
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS  
10:CLASS 11:CLASS 12:CLASS

L1        STRUCTURE UPLOADED

=> d query

L1        STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 18:21:07 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 5202 TO ITERATE

19.2% PROCESSED 1000 ITERATIONS 0 ANSWERS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 99716 TO 108364  
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s l1 full

FULL SEARCH INITIATED 18:21:12 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 105573 TO ITERATE

100.0% PROCESSED 105573 ITERATIONS 137 ANSWERS  
SEARCH TIME: 00.00.02

L3 137 SEA SSS FUL L1

=> fil caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	155.42	155.63

FILE 'CAPLUS' ENTERED AT 18:21:16 ON 30 SEP 2004  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 30 Sep 2004 VOL 141 ISS 14  
FILE LAST UPDATED: 29 Sep 2004 (20040929/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> s l3

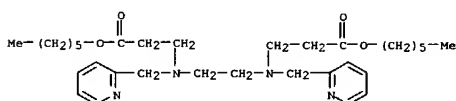
L4            62 L3

=> d l4 1-62 abs ibib hitstr



L4 ANSWER 1 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB A new tetradentate ligand, N,N'-bis(pyridin-2-yl- methyl-3-hexo-3-oxopropyl)ethane-1,2-diamine (BPED) was synthesized and examined as the ligand of copper halide for ATRP of styrene (St), Me acrylate (MA), and methacrylate (MMA), and compared with other analogous linear tetradentate ligands. The BPED ligand was found to significantly promote the activation reaction: the CuBr/BPED complex reacted with the initiators so fast that a large amount of Cu(II)Br2/BPED was produced and thus the polymers were slow for all the monomers. The reaction of CuCl/BPED with the initiator was also fast, but by reducing the catalyst concentration or adding CuCl2, the activation reaction could be slowed to establish the equilibrium of ATRP for a well-controlled living polymerization of MA. CuCl/BPED was found very active for the polymerization of MA. For example, 10 mol% of the catalyst relatively to the initiator was sufficient to mediate a living polymerization of MA. The CuCl/BPED, however, could not catalyze a living polymerization of MMA because the resulting CuCl2/BPED could not deactivate the growing radicals. The effects of the ligand structures on the catalysis of ATRP are also discussed.

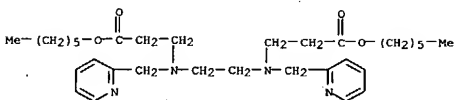
ACCESSION NUMBER: 2004:551802 CAPLUS  
 DOCUMENT NUMBER: 141:225884  
 TITLE: A new tetradentate ligand for atom transfer radical polymerization  
 AUTHOR(S): Ding, Shijie; Shen, Youqing; Radosz, Maciej  
 CORPORATE SOURCE: Department of Chemical and Petroleum Engineering, University of Wyoming, Laramie, WY, 82071, USA  
 SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (2004), 42(14), 3553-3562  
 CODEN: JPACCC; ISSN: 0887-624X  
 PUBLISHER: John Wiley & Sons, Inc.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 688006-29-3P  
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (preparation as ligands for copper halide for atom transfer radical polymerization of styrene, Me methacrylate, and Me acrylate)  
 RN 688006-29-3 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediybis[N-(2-pyridinylmethyl)-, dihexyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS

L4 ANSWER 2 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB The living polymerization of N,N-dimethylacrylamide was achieved by atom transfer radical polymerization catalyzed by copper chloride complexed with a new ligand, N,N'-bis(pyridin-2-ylmethyl 3-hexo-3-oxopropyl)ethane-1,2-diamine (BPED). With Me 2-chloropropionate as the initiator, the polymerization reached high conversions (>90%) at 80 °C and 100 °C, producing polymers with Mn very close to theor. values and low polydispersity. The ligand, temperature, and copper halide strongly affected the activity and control of the polymerization

ACCESSION NUMBER: 2004:251185 CAPLUS  
 DOCUMENT NUMBER: 140:391565  
 TITLE: Atom transfer radical polymerization of N,N-dimethylacrylamide  
 AUTHOR(S): Ding, Shijie; Radosz, Maciej; Shen, Youqing  
 CORPORATE SOURCE: Department of Chemical and Petroleum Engineering, University of Wyoming, Laramie, WY, 82071, USA  
 SOURCE: Macromolecular Rapid Communications (2004), 25(5), 632-636  
 CODEN: MRCOE3; ISSN: 1022-1336  
 PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 688006-29-3P  
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (ligand: atom transfer radical polymerization of N,N-dimethylacrylamide)  
 RN 688006-29-3 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediybis[N-(2-pyridinylmethyl)-, dihexyl ester (9CI) (CA INDEX NAME)

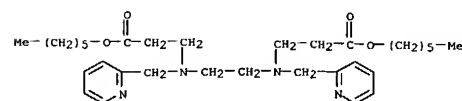


REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

L4 ANSWER 1 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

L4 ANSWER 3 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB A new tetradentate ligand, N,N'-bis(pyridin-2-ylmethyl-3-hexo-3-oxopropyl)ethane-1,2-diamine (BPED) was synthesized and examined as the ligand of copper halide for atom transfer radical polymerization (ATRP) of styrene, Me acrylate, and Me methacrylate. The BPED ligand was found to significantly promote the activation reaction, therefore, CuBr complexed with BPED reacted with the initiators so fast that a large amount of Cu(II)Br2/BPED was produced and thus the polymers were slow for all the polymers. The reaction of CuCl/BPED with the initiator was also fast, but by reducing the catalyst concentration or adding CuCl2, the activation reaction could be slowed to establish the equilibrium of ATRP for a well-controlled living polymerization of MA. CuCl/BPED was found very active for the polymerization of MA, however, it could not catalyze a living polymerization of MMA because the resulting CuCl2/BPED could not deactivate the growing radicals. The effects of the ligand structures on the catalysis of ATRP will also be discussed.

ACCESSION NUMBER: 2004:234538 CAPLUS  
 DOCUMENT NUMBER: 141:23981  
 TITLE: A tetradentate ligand forming highly active catalysts for atom transfer radical polymerization  
 AUTHOR(S): Shen, Youqing; Ding, Shijie; Radosz, Maciej  
 CORPORATE SOURCE: Department of Chemical and Petroleum Engineering, University of Wyoming, Laramie, WY, 82071, USA  
 SOURCE: Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2004), 45(1), 776-777  
 CODEN: ACPPAY; ISSN: 0032-3934  
 PUBLISHER: American Chemical Society, Division of Polymer Chemistry  
 DOCUMENT TYPE: Journal; (computer optical disk)  
 LANGUAGE: English  
 IT 688006-29-3P  
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (synthesis of a tetradentate ligand as catalyst for atom transfer radical polymerization)  
 RN 688006-29-3 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediybis[N-(2-pyridinylmethyl)-, dihexyl ester (9CI) (CA INDEX NAME)



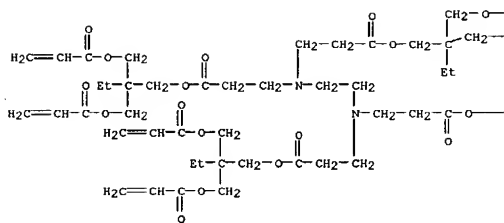
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

AB An dendritic acrylate oligomer with eight double bonds (DAO) was synthesized by Michael addition reaction of ethylenediamine (EDA) and trimethylolpropane triacrylate (TMPTA) under mild conditions, and was easily separated from the reaction system with methanol. The structure of DAO was characterized by IR, <sup>1</sup>H-NMR, and elemental anal. DAO is UV curable oligomer with low viscosity and high curing speed. Its viscosity was 10.85% of that of the linear acrylic oligomers with similar mol. weight (EBECRYL Resin 285). With Darocure 1173 as the photoinitiator, the curing speed of DAO was resp. 7.5 and 10.3 times higher than that of EBECRYL Resin 605 and EBECRYL Resin 285. Furthermore, the effect of the photoinitiator and active diluent on curing speed of DAO UV curing system was studied.

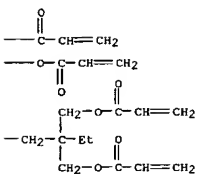
ACCESSION NUMBER: 2004:201626 CAPLUS  
DOCUMENT NUMBER: 140:375591  
TITLE: A novel dendritic acrylate oligomer: synthesis and UV curable properties  
AUTHOR(S): Xu, Dong-Mei; Zhang, Ke-Da; Zhu, Xiu-Lin  
CORPORATE SOURCE: Chemistry and Chemical Engineering Department, Suzhou University, Jiangsu, 215006, Peop. Rep. China  
SOURCE: Journal of Applied Polymer Science (2004), 92(2), 1018-1022  
CODEN: JAPNAB; ISSN: 0021-8995  
PUBLISHER: John Wiley & Sons, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English

IT 511550-36-OP  
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(synthesis and UV curable properties of novel dendritic acrylate oligomer)  
RN 511550-36-0 CAPLUS  
CN 11,15-Dioxa-4,7-diazaoctadec-17-enoic acid, 4,7-bis[3-[2,2-bis[(1-oxo-2-propenyl)oxy]methyl]butoxy]-3-oxopropyl]-13-ethyl-10,16-dioxo-13-[(1-oxo-2-propenyl)oxy]methyl]-, 2,2-bis[(1-oxo-2-propenyl)oxy]methyl]butyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

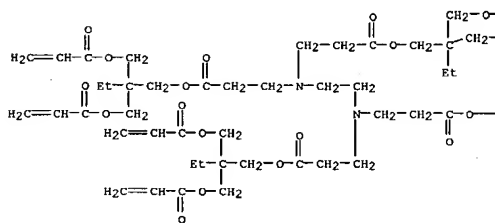


IT 685142-45-4P 685142-46-5P 685142-47-6P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(synthesis and UV curable properties of novel dendritic acrylate oligomer)  
RN 685142-45-4 CAPLUS  
CN 11,15-Dioxa-4,7-diazaoctadec-17-enoic acid, 4,7-bis[3-[2,2-bis[(1-oxo-2-propenyl)oxy]methyl]butoxy]-3-oxopropyl]-13-ethyl-10,16-dioxo-13-[(1-oxo-2-propenyl)oxy]methyl]-, 2,2-bis[(1-oxo-2-propenyl)oxy]methyl]butyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 511550-36-0  
CMP C62 H88 N2 O24

PAGE 1-A



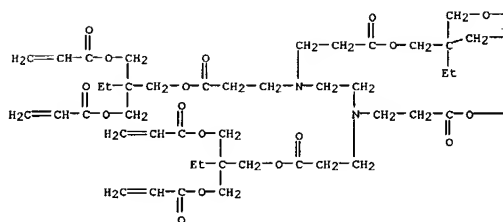
PAGE 1-B

RN 685142-46-5 CAPLUS  
CN 11,15-Dioxa-4,7-diazaoctadec-17-enoic acid, 4,7-bis[3-[2,2-bis[(1-oxo-2-propenyl)oxy]methyl]butoxy]-3-oxopropyl]-13-ethyl-10,16-dioxo-13-[(1-oxo-2-propenyl)oxy]methyl]-, 2,2-bis[(1-oxo-2-propenyl)oxy]methyl]butyl ester, polymer with (1-methyl-1,2-ethanediy)bis[oxymethyl-2,1-ethanediy]] di-2-propenoate (9CI) (CA INDEX NAME)

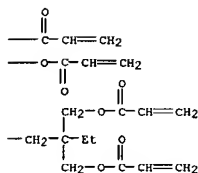
CM 1

CRN 511550-36-0  
CMP C62 H88 N2 O24

PAGE 1-A

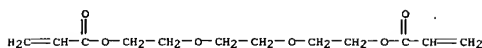


PAGE 1-B



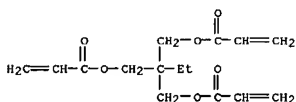
CM 2

CRN 42978-66-5  
CMF C15 H24 O6  
CCI IDS



3 ( D1-Me )

RN 685142-47-6 CAPLUS

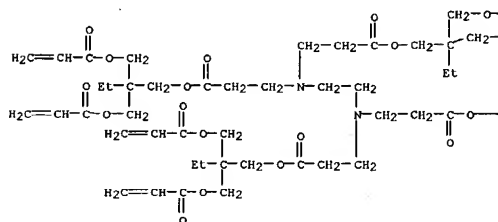


REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

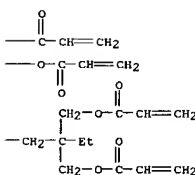
CM 1

CRN 511550-36-0  
CMF C62 H88 N2 O24

PAGE 1-A



PAGE 1-B



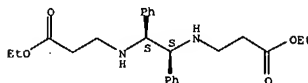
CM 2

CRN 15625-89-5 /  
CMF C15 H20 O6

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1391444	Al	20040225	EP 2003-18220	20030811
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL			DE 2002-1023814	20020821
DE 10238114	Al	20040304	US 2003-643855	20030819
US 2004044238	Al	20040304	DE 2002-1023814	A 20020821

OTHER SOURCE(S): CASREACT 140:217374; MARPAT 140:217374  
IT 663931-96-2P 663931-97-3P  
RI: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);  
USES (Uses)  
(preparation of optically active 1,2-diaminoalkanes and their use in  
catalytic processes)  
RN 663931-96-2 CAPLUS  
CN  $\beta$ -Alanine, N,N'-((1S,2S)-1,2-diphenyl-1,2-ethanediyl)bis-, diethyl  
ester (9CI) (A INDEX NAME)

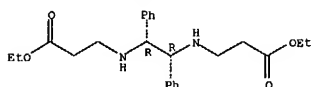
Absolute stereochemistry.



RN 663931-97-3 CAPLUS  
CN  $\beta$ -Alanine, N,N'-[(1R,2R)-1,2-diphenyl-1,2-ethanediyl]bis-, diethyl

L4 ANSWER 5 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

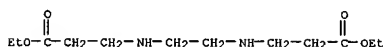


REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

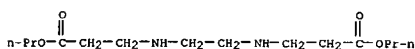
L4 ANSWER 6 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Depending on the ester alkyl group, the reaction of O,O-dialkyl ethylenediamine-N,N'-di-3-propanoate ligands (R2eddp) with K2PtCl6 afforded trans-dichloro(ethylenediamine-N,N'-di-3-propanoato)platinum(IV) and tetrachloro(O,O-dialkyl ethylenediamine-N,N'-di-3-propanoato)platinum(IV) complexes. The complexes were characterized by elemental anal., electronic absorption, IR, 1H and 13C NMR spectroscopy. The trans configuration of [Pt(eddp)Cl2] complex was confirmed by x-ray crystallog.

ACCESSION NUMBER: 2004:87439 CAPLUS  
DOCUMENT NUMBER: 141:198941  
TITLE: Complex compounds of platinum(IV) and O,O-dialkyl-ethylenediamine-N,N'-di-3-propanoate ligands. A structural evidence for geometry of hydrolytic product of some esters  
AUTHOR(S): Sabo, Tibor J.; Kaluderovic, Goran N.; Grguric-Sipka, Sanja R.; Heinemann, Frank W.; Trifunovic, Srecko R.  
CORPORATE SOURCE: Faculty of Chemistry, University of Belgrade, Belgrade, 11001, Yugoslavia  
SOURCE: Inorganic Chemistry Communications (2004), 7(2), 241-244  
CODEN: ICCOFP; ISSN: 1387-7003  
PUBLISHER: Elsevier Science B.V.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 147416-88-4 493001-28-8 493001-29-9  
493001-30-2  
RL: RCT (Reactant); RACT (Reactant or reagent) (reactant for preparation of platinum ethylenediaminedipropionate complex)  
RN 147416-88-4 CAPLUS  
CN  $\beta$ -Alanine, N,N'-1,2-ethanediyldis-, diethyl ester, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

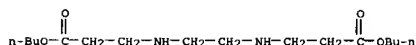
RN 493001-28-8 CAPLUS  
CN  $\beta$ -Alanine, N,N'-1,2-ethanediyldis-, dipropyl ester, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 493001-29-9 CAPLUS  
CN  $\beta$ -Alanine, N,N'-1,2-ethanediyldis-, dibutyl ester, dihydrochloride

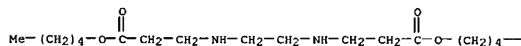
L4 ANSWER 6 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
(9CI) (CA INDEX NAME)



●2 HCl

RN 493001-30-2 CAPLUS  
CN  $\beta$ -Alanine, N,N'-1,2-ethanediyldis-, dipentyl ester, dihydrochloride (9CI) (CA INDEX NAME)

PAGE 1-A



●2 HCl

PAGE 1-B

—Me

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

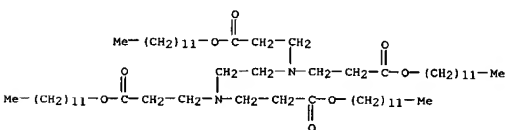
FORMAT

L4 ANSWER 7 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
AB A lower generation dendritic twelve ester has been synthesized from ethylenediamine and acrylic twelve ester by Michael addition reaction in the solvent methanol. The effect of reaction conditions on the yield of dendritic twelve ester was investigated and the optimum reaction conditions were estimated as follows: amount of ethylenediamine was 2 mL(30 mmol), the molar ratio of ethylenediamine to acrylic twelve ester was 1:6, the volume fraction of methanol was 50%, the reaction temperature was 40° and the reaction time was 48 h. Under the optimum reaction conditions, the yield of dendritic twelve ester was 54.9%.

ACCESSION NUMBER: 2003:1010026 CAPLUS  
DOCUMENT NUMBER: 141:53948  
TITLE: Synthesis of dendritic twelve ester  
AUTHOR(S): Li, Cui-qin; Wang, Jun; Li, Jie; Liu, Li-xin; Wan, Jia-q  
CORPORATE SOURCE: Department of Petrochemistry, Daqing Petroleum Institute, Daqing, 163318, Peop. Rep. China  
SOURCE: Hecheng Huaxue (2003), 11(5), 424-426  
CODEN: HEHUEZ; ISSN: 1005-1511  
PUBLISHER: Hecheng Huaxue Bianjibu  
DOCUMENT TYPE: Journal  
LANGUAGE: Chinese  
OTHER SOURCE(S): CASREACT 141:53948

IT 706808-46-0P  
RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of dendritic twelve ester)

RN 706808-46-0 CAPLUS  
CN  $\beta$ -Alanine, N,N'-1,2-ethanediyldis[N-[3-(dodecyloxy)-3-oxopropyl]-, didodecyl ester (9CI) (CA INDEX NAME)



\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Claimed are compds. capable of direct transformation into a radiopharmaceutical having a binding affinity for the LTB<sub>4</sub> receptor of <1000 nm. The present invention provides novel radiopharmaceuticals useful for the diagnosis of infection and inflammation, reagents and kits useful for preparing the radiopharmaceuticals, methods of imaging sites

of infection and/or inflammation in a patient, and methods of diagnosing diseases associated with infection or inflammation in patients in need of such diagnosis. The radiopharmaceuticals bind in vivo to the leukotriene B<sub>4</sub> (LTB<sub>4</sub>) receptor on the surface of leukocytes which accumulate at the site of infection and inflammation. The reagents provided by this invention are also useful for the treatment of diseases associated with infection and inflammation. Thus, the leukotriene antagonist (I) was prepared and shown to be active in an LTB<sub>4</sub> human neutrophil (PMN) binding assay. Compound I was used to prepare 99mTc(tricline) (TPPTS) (4-ethyl-2-(4-fluorophenyl)-5-(5,3-dimethyl-6-[[[6-diazenido-3-pyridinyl]carbonyl]amino]hexyl]oxy]phenol) (TPPTS = tri(3-sulfonatophenyl)phosphine, sodium salt) which was used to detect inflammation/infection in guinea pig and rabbit focal infection models. Also, indium-111 complexes, e.g., of DOTA derivative II (R =

CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H), were prepared as claimed radiopharmaceuticals.  
ACCESSION NUMBER: 2003:511824 CAPLUS  
DOCUMENT NUMBER: 139:94263  
TITLE: Radiopharmaceuticals for imaging infection and inflammation  
INVENTOR(S): Barrett, John Andrew; Cheesman, Edward Hollister; Harris, Thomas David; Liu, Shuang; Rajopadhye, Milind;  
Milind; Sworin, Michael  
PATENT ASSIGNEE(S): USA  
SOURCE: U.S. Pat. Appl. Publ., 146 pp., Cont.-in-part of U.S. 6,416,733.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003124053	A1	20030703	US 2002-151663	20020520
US 6416733	B1	20020709	US 1997-943659	19971003
WO 2003099810	A2	20031204	WO 2003-US16008	20030520
WO 2003099810	A3	20040429		

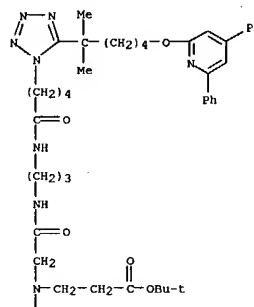
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD,

RU, TJ, TM  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

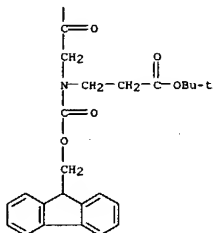
PRIORITY APPLN. INFO.: US 1996-27955P P 19961007  
US 1997-943659 A2 19971003  
US 2002-151663 A 20020520

OTHER SOURCE(S): MARPAT 139:94263  
IT 556063-12-8P 556063-13-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of indium complexes with leukotriene antagonist ligands for imaging and treatment of infection and inflammation)  
RN 556063-12-8 CAPLUS  
CN Glycinamide, N-[3-(1,1-dimethylethoxy)-3-oxopropyl]-N-[(9H-fluoren-9-ylmethoxy)carbonyl]glycyl-N2-[3-(1,1-dimethylethoxy)-3-oxopropyl]-N-[3-[[5-[5-[[4,6-diphenyl-2-pyridinyl]oxy]-1,1-dimethylpentyl]-1H-tetrazol-1-yl]-1-oxopentyl]amino]propyl]- (9CI) (CA INDEX NAME)

PAGE 1-A



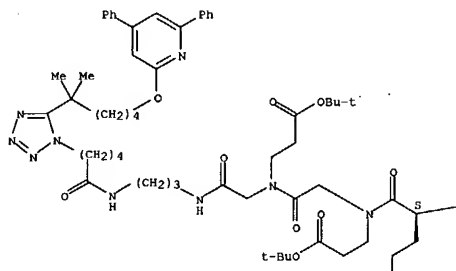
PAGE 2-A



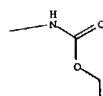
RN 556063-13-9 CAPLUS  
CN β-Alanine, N-[(9H-fluoren-9-ylmethoxy)carbonyl]-L-glutamoylbis[N-[3-(1,1-dimethylethoxy)-3-oxopropyl]glycyl-N-2-[[3-[[5-[5-[[4,6-diphenyl-2-pyridinyl]oxy]-1,1-dimethylpentyl]-1H-tetrazol-1-yl]-1-oxopentyl]amino]propyl]amino]-2-oxoethyl]-, bis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

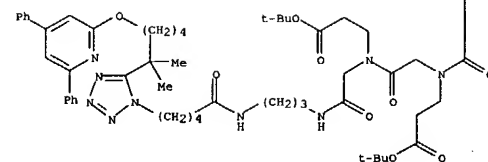
PAGE 1-A



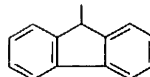
PAGE 1-B



PAGE 2-A



PAGE 2-B

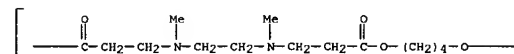


L4 ANSWER 9 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
AB A decomposable thin film comprises a plurality of polyelectrolyte layers of alternating charge, wherein decomposition of the thin film is characterized by degradation of at least a portion of the polyelectrolyte layers.  
Thus, a silicone substrate was deposited with 10 bilayers of linear polyethylenimine/poly(sodium 4-styrenesulfonate) and 10 bilayers of 1,4-butanediol diacrylate-N,N'-dimethylethylenediamine copolymer/poly(sodium 4-styrenesulfonate).  
ACCESSION NUMBER: 2003:335164 CAPLUS  
DOCUMENT NUMBER: 138:339346  
TITLE: Methods of making decomposable thin films of polyelectrolytes and uses thereof  
INVENTOR(S): Lynn, David M.; Vazquez, Eduardo; Langer, Robert S.; Hammond, Paula  
PATENT ASSIGNEE(S): Massachusetts Institute of Technology, USA  
SOURCE: PCT Int. Appl., 65 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003035716	A1	20030501	WO 2002-US34191	20021025
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GW, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003124368	A1	20030703	US 2002-280268	20021024
PRIORITY APPLN. INFO.:			US 2001-335213P	P 20011025

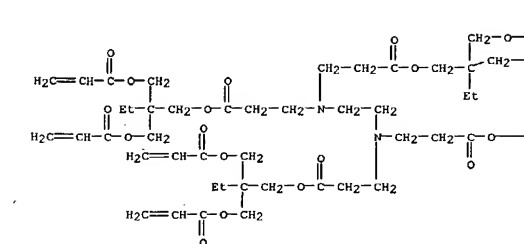
IT 311310-00-6  
RL: PEP (Physical, engineering or chemical process); PVP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(methods of making decomposable thin films of polyelectrolytes for drug delivery systems)  
RN 311310-00-6 CAPLUS  
CN Poly[oxy-1,4-butanediolyloxy(1-oxo-1,3-propanediyl)(methylimino)-1,2-ethanediyl(methylimino)(3-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



L4 ANSWER 10 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Employing divergent strategy, starburst mol. with eight peripheral C=C was synthesized from ethylenediamine (EDA) and trimethylolpropane triacrylate (TMPTA) by Michael addition reaction, and the structure of the mol. was identified by IR, NMR and elementary anal. Effects of reaction temperature, reaction time, ratio of reactants and solvent content on the yield and purity of the product were studied. The best reaction conditions were: n(TMPTA):n(EDA) = 5:1 in CH3OH solvent at 30°C for 6 h, and the yield and purity of the products were 65.11 % and 97.74 %, resp. The curing speed of the product in the presence of photopolymer. initiator and active diluents under UV radiation was 4-87 times faster than that of similarly com. available oligomers, such as 601 and 602.  
ACCESSION NUMBER: 2002:966272 CAPLUS  
DOCUMENT NUMBER: 138:321632  
TITLE: Synthesis and characterization of a quick UV-curing starburst molecule  
AUTHOR(S): Ning, Chun-hua; Xu, Dong-mei; Zhang, Ke-da; Zhu, Xiu-lin  
CORPORATE SOURCE: Chemistry and Chemical Engineering Department, Soochow University, Suzhou, 215006, Peop. Rep. China  
SOURCE: Jingxi Huagong (2002), 19(11), 631-633, 643  
CODEN: JIHUFJ; ISSN: 1003-5214  
PUBLISHER: Jingxi Huagong Bianjibub  
DOCUMENT TYPE: Journal  
LANGUAGE: Chinese  
IT 511550-36-ODP, polymers with epoxy acrylate  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(preparation of quick UV-curable starburst mol. by Michael addition)  
RN 511550-36-0 CAPLUS  
CN 11,15-Dioxa-4,7-diazaoctadec-17-enoic acid, 4,7-bis[3-[2,2-bis[(1-oxo-2-propenyl)oxy]methyl]butoxy]-3-oxopropyl]-13-ethyl-10,16-dioxo-13-[[[(1-oxo-2-propenyl)oxy]methyl]-, 2,2-bis[(1-oxo-2-propenyl)oxy]methyl]butyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



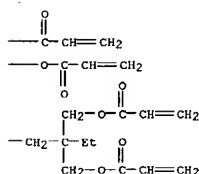
L4 ANSWER 9 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-B

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RECORD.  
FORMAT

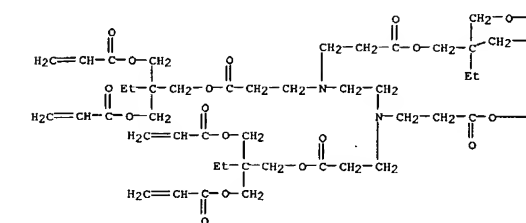
L4 ANSWER 10 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-B

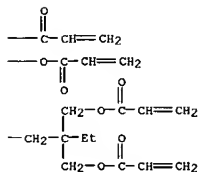


IT 511550-36-OP  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of quick UV-curable starburst mol. by Michael addition)  
RN 511550-36-0 CAPLUS  
CN 11,15-Dioxa-4,7-diazaoctadec-17-enoic acid, 4,7-bis[3-[2,2-bis[(1-oxo-2-propenyl)oxy]methyl]butoxy]-3-oxopropyl]-13-ethyl-10,16-dioxo-13-[[[(1-oxo-2-propenyl)oxy]methyl]-, 2,2-bis[(1-oxo-2-propenyl)oxy]methyl]butyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

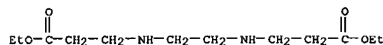


L4 ANSWER 11 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB The novel N,N'-type bidentate ligands, diethyl-(deedp·2HCl), dipropyl- (dpeddp·2HCl), dibutyl- (dbeddp·2HCl) and dipentyl- (dveddp·2HCl) esters of ethylenediamine-N,N'-di-3-propanoic acid dihydrochloride (H2eddp·2HCl), and the eddp-Co(III) complexes with the corresponding esters were synthesized via an air oxidation method. During the preparation of these complexes, one part of the ester coordinated as a bidentate ligand, and the other part hydrolyzed and coordinated as a tetradentate ONNO ligand geospecifically to the Co(III) ion to give only one isomer, Cl-sym., which was characterized by electronic absorption, IR, 1H and 13C NMR spectroscopy and elemental anal.

It is of interest that this is the first CoII(eddp)(N,N'-R2-en)-type complex preparation, which gives only one isomer, without regard to the number of atoms in the alkyl chain.

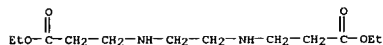
ACCESSION NUMBER: 2002:838389 CAPLUS  
 DOCUMENT NUMBER: 138:146622  
 TITLE: Synthesis and characterization of the cobalt(III) complexes with ethylenediamine-N,N'-di-3-propanoate ligand and its esters  
 AUTHOR(S): Kaluderovic, Goran N.; Sabo, Tibor J.  
 CORPORATE SOURCE: Faculty of Chemistry, University of Belgrade, Belgrade, 11001, Yugoslavia  
 SOURCE: Polyhedron (2002), 21(22), 2277-2282  
 CODEN: PLYHDE; ISSN: 0277-5387  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 138:146622

IT 19294-22-5, β-Alanine, N,N'-1,2-ethanedylbis-, diethyl ester  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation and complexation with cobalt(III) via air oxidation method)  
 RN 19294-22-5 CAPLUS  
 CN β-Alanine, N,N'-1,2-ethanedylbis-, diethyl ester (9CI) (CA INDEX NAME)



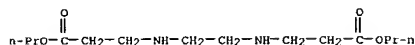
IT 147416-88-4P 493001-28-8P 493001-29-9P  
 493001-30-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and complexation with cobalt(III) via air oxidation method)  
 RN 147416-88-4 CAPLUS  
 CN β-Alanine, N,N'-1,2-ethanedylbis-, diethyl ester, dihydrochloride (9CI) (CA INDEX NAME)

PAGE 1-B



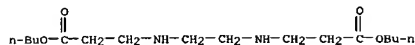
● 2 HCl

RN 493001-28-8 CAPLUS  
 CN β-Alanine, N,N'-1,2-ethanedylbis-, dipropyl ester, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

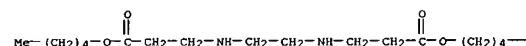
RN 493001-29-9 CAPLUS  
 CN β-Alanine, N,N'-1,2-ethanedylbis-, dibutyl ester, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 493001-30-2 CAPLUS  
 CN β-Alanine, N,N'-1,2-ethanedylbis-, dipentyl ester, dihydrochloride (9CI) (CA INDEX NAME)

PAGE 1-A



● 2 HCl

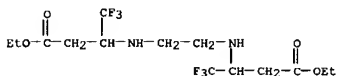
—Me

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

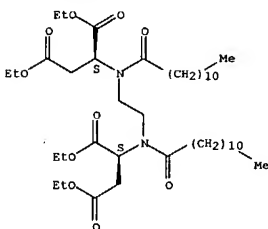


AB (E)- or (Z)-perfluorinated  $\beta$ -enaminoesters, e.g. I and II, were prepared by direct addition of primary or secondary amines to Et perfluoroalkynoates without any catalyst.

ACCESSION NUMBER: 2002:732461 CAPLUS  
DOCUMENT NUMBER: 138:187392  
TITLE: Easy synthesis of (E)- or (Z)-perfluorinated  $\beta$ -enaminoesters  
AUTHOR(S): Prie, Gildas; Richard, Sebastien; Parrain, Jean-Luc; Duchene, Alain; Abarril, Mohamed  
CORPORATE SOURCE: Faculte des Sciences de Tours, Laboratoire de Physicochimie des Interfaces et des Milieux Reactionnels, Tours, 37200, Fr.  
SOURCE: Journal of Fluorine Chemistry (2002), 117(1), 35-41  
CODEN: JFLCAR; ISSN: 0022-1139  
PUBLISHER: Elsevier Science B.V.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 138:187392  
IT 498583-19-0P  
RL: SPN (Synthetic preparation); PREP (Preparation) (synthesis of (E)- or (Z)-perfluorinated  $\beta$ -enaminoesters)  
RN 498583-19-0 CAPLUS  
CN Butanoic acid, 3,3'-(1,2-ethanediylidimino)bis(4,4,4-trifluoro-, diethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT



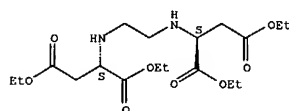
L4 ANSWER 13 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
AB (CH<sub>2</sub>)<sub>n</sub>[NRCH(CO<sub>2</sub>CmH<sub>2</sub>m+1)CH<sub>2</sub>CO<sub>2</sub>CmH<sub>2</sub>m+1]<sub>2</sub> (R = C<sub>8</sub>-20 acyl; m, n = 2-6) are prepared. Thus, (CH<sub>2</sub>)<sub>11</sub>[NRCH(CO<sub>2</sub>CmH<sub>2</sub>m+1)CH<sub>2</sub>CO<sub>2</sub>CmH<sub>2</sub>m+1]<sub>2</sub> (R = H, m = n = 2) was acylated with lauroyl chloride to give the corresponding amide.

ACCESSION NUMBER: 2002:566257 CAPLUS  
DOCUMENT NUMBER: 137:124933  
TITLE: Preparation of amides of N,N'-alkylenediaminedisuccinic acid esters as intermediates for anionic surfactants  
INVENTOR(S): Tsubone, Kazuyuki  
PATENT ASSIGNEE(S): Kanebo, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKKXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002212156	A2	20020731	JP 2001-8626	20010117
PRIORITY APPLN. INFO.:			JP 2001-8626	20010117

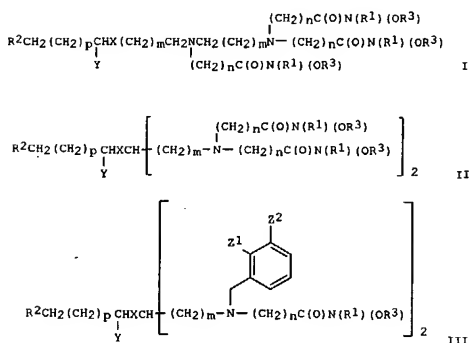
OTHER SOURCE(S): MARPAT 137:124933  
IT 1115-44-2  
RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of amides of N,N'-alkylenediaminedisuccinic acid esters)  
as intermediates for anionic surfactants)  
RN 1115-44-2 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetraethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 444103-15-5P  
RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of amides of N,N'-alkylenediaminedisuccinic acid esters)  
as intermediates for anionic surfactants)  
RN 444103-15-5 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis[N-(1-oxododecyl)-, tetraethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



AB The preparation is described for new types of hydroxamic acid-based bifunctional chelators (I, II and III; n, m, p = 1-4, X = CH<sub>2</sub>, NR, O, S; Y = H, OH, :O, N(R)(R'), :S; Z1, Z2 = H, NR, OH, SH; R, R' and R1-R3 are described in the document). These chelators are designed to chelate metal ions that can be detected either by their paramagnetic or radioactive properties. Conjugation with peptides or protein can be achieved by the presence of a linker moiety in the mol. structure of these chelators.

ACCESSION NUMBER: 2002:466531 CAPLUS  
DOCUMENT NUMBER: 137:33136  
TITLE: Preparation of novel bifunctional chelating compounds containing hydroxamic acid residues  
INVENTOR(S): Flanagan, Richard J.; Dufour, Jean-marc  
PATENT ASSIGNEE(S): Can.  
SOURCE: U.S. Pat. Appl. Publ., 30 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

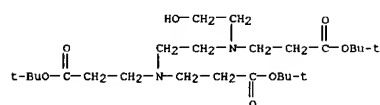
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002076377	A1	20020620	US 2000-739436	20001218
US 6623721	B2	20030823		
WO 2002068379	A2	20020906	WO 2001-1B2895	20011218



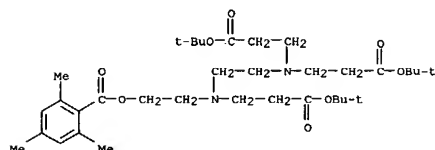
L4 ANSWER 14 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 WO 2002068379 A3 20030213  
 W: CA, JP  
 RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
 PT, SE, TR  
 EP 1351926 A2 20031015 EP 2001-273825 20011218  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, FI, CY, TR  
 US 2004086460 A1 20040506 US 2003-634335 20030804  
 US 2000-739436 A 20001218  
 PRIORITY APPLN. INFO.:  
 WO 2001-182895 W 20011218

OTHER SOURCE(S): MARPAT 137:33136  
 IT 437769-50-1P 437769-51-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation of bifunctional chelating compds. containing hydroxamic

acid residues)  
 RN 437769-50-1 CAPLUS  
 CN  $\beta$ -Alanine, N-[2-[bis[3-(1,1-dimethylethoxy)-3-oxopropyl]amino]ethyl]-  
 N-(2-hydroxyethyl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

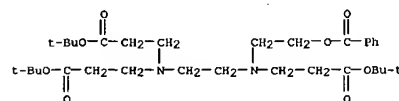


RN 437769-51-2 CAPLUS  
 CN Benzoic acid, 2,4,6-trimethyl-, 2-[[2-[bis[3-(1,1-dimethylethoxy)-3-oxopropyl]amino]ethyl][3-(1,1-dimethylethoxy)-3-oxopropyl]amino]ethyl ester (9CI) (CA INDEX NAME)

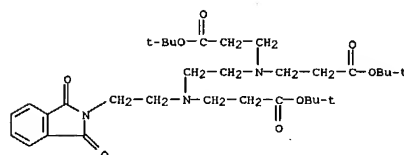


IT 437769-55-6P 437769-56-7P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of bifunctional chelating compds. containing hydroxamic  
 acid residues)  
 RN 437769-55-6 CAPLUS  
 CN  $\beta$ -Alanine, N-[2-(benzoyloxy)ethyl]-N-[2-[bis[3-(1,1-dimethylethoxy)-3-

L4 ANSWER 14 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 oxopropyl]amino]ethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 437769-56-7 CAPLUS  
 CN  $\beta$ -Alanine, N-[2-[bis[3-(1,1-dimethylethoxy)-3-oxopropyl]amino]ethyl]-  
 N-[2-(1,3-dihydro-1,3-dioxo-2H-isindol-2-yl)ethyl]-, 1,1-dimethylethyl  
 ester (9CI) (CA INDEX NAME)

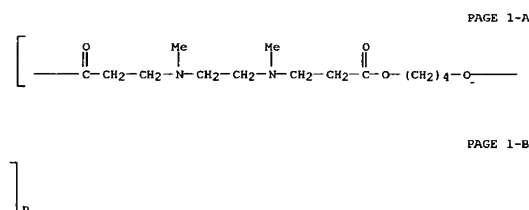


L4 ANSWER 15 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Poly( $\beta$ -amino esters) prepared from the conjugate addition of  
 bis(secondary amines) or primary amines to a bis(acrylate ester) are described. Methods  
 of preparing these polymers from com. available starting materials are  
 also provided. These tertiary amine-containing polymers are preferably  
 biodegradable and biocompatible and may be used in a variety of drug  
 delivery systems. Given the poly(amine) nature of these polymers, they  
 are particularly suited for the delivery of polynucleotides.  
 Nanoparticles containing polymer/polynucleotide complexes have been  
 prepared.  
 The inventive polymers may also be used to encapsulate other agents to be  
 delivered. They are particularly useful in delivering labile agents  
 given their ability to buffer the pH of their surroundings. Copolymers were  
 prepared from 1,4-butanediol diacrylate and diamines N,N'-  
 dimethylethylenediamine, piperazine, and 4,4'-trimethylenedipiperidine,  
 resp. Examples given include cytotoxicity assays, self-assembly of the  
 polymers with plasmid DNA, rapid, pH-triggered release from polymer  
 microspheres within the range of intracellular pH.  
 ACCESSION NUMBER: 2002:293739 CAPLUS  
 DOCUMENT NUMBER: 136:315018  
 TITLE: Biodegradable poly( $\beta$ -aminoesters) for drug and  
 polynucleotide delivery  
 INVENTOR(S): Langer, Robert S.; Lynn, David M.; Putnam, David;  
 Amiji, Mansoor M.; Anderson, Daniel G.  
 PATENT ASSIGNEE(S): Massachusetts Institute of Technology, USA  
 SOURCE: PCT Int. Appl., 133 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002031025	A2	20020418	WO 2001-US31270	20011005
WO 2002031025	A3	20020718		
WO 2002031025	C2	20030530		
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 2002131951	A1	20020919	US 2001-969431	20011002
EP 1401918	A2	20040331	EP 2001-977541	20011005
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
JP 2004511596	T2	20040415	JP 2002-534403	20011005
PRIORITY APPLN. INFO.:			US 2000-239330P	P 20001010
			US 2001-305337P	P 20010713
			US 2001-969431	A 20011002
			WO 2001-US31270	W 20011005

IT 311310-00-6P  
 RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use);  
 BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (biodegradable poly( $\beta$ -aminoesters) for drug and polynucleotide

L4 ANSWER 15 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 delivery)  
 RN 311310-00-6 CAPLUS  
 CN Poly[oxy-1,4-butanediolyloxy(1-oxo-1,3-propanediyl)(methylimino)-1,2-  
 ethanediyl(methylimino)(3-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)



PAGE 1-A

PAGE 1-B

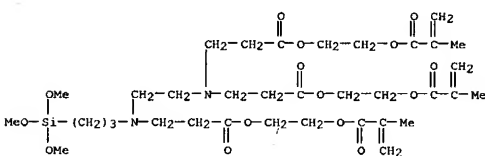
L4 ANSWER 16 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB Bismethacrylate monomers and macromonomers bearing various alkoxysilyl units were prepared by convenient Michael addition of ethylene glycol acrylate methacrylate (EGAMA) and ethylene glycol bisacrylate (EGBA) to various  $\alpha,\omega$ -alkoxysilylamines. The resulting monomers and macromonomers have been characterized in detail by NMR spectroscopy, VPO measurements and FAB-MS. Average mol. wts. Mn ranged between 530 and 1600 (VPO) in addition reactions with bisacrylates. FAB-MS evidenced the formation of a homologous macromonomer series. Viscosities of the liquid monomers are relatively low, ranging from 52 to 305 mPa.s. This renders these compds. interesting as reactive diluents in dental composite formulations. Polymerization of the monomers and macromonomers resulted in low volumetric shrinkage in the range of  $\Delta V = 2.2-7.8\%$  at high methacrylate conversion. Crosslinking was monitored by photo-DSC. Furthermore, composites were prepared by mixing Bis-GMA with the new hybrid monomers, initiator and glass filler. The composites showed compressive strengths of 190-329 MPa, flexural strengths from 23 to 53 MPa and Young's moduli between 2090 and 5060 MPa. Low volumetric shrinkage was observed also for the composites upon photopolymer., ranging from only 0.8% to 2.2% in comparison to over 3% shrinkage of com. available composites. Besides the viscosity reducing effect due to the branched structure, the pendant alkoxysilyl groups of the synthesized hybrid monomers can be polymerized to form nanoparticles with reactive acrylate surface, permitting the in situ preparation of nanocomposites.

ACCESSION NUMBER: 2001:527818 CAPLUS  
 DOCUMENT NUMBER: 135:257485  
 TITLE: Bismethacrylate-Based Hybrid Monomers via Michael-Addition Reactions  
 AUTHOR(S): Mueh, Ekkehard; Marquardt, Juergen; Klee, Joachim E.; Frey, Holger; Muelhaupt, Rolf  
 CORPORATE SOURCE: Institut fuer Makromolekulare Chemie und Freiburger Materialforschungszentrum, Albert-Ludwigs-Universitaet, Freiburg im Breisgau, D-79104, Germany  
 SOURCE: Macromolecules (2001), 34(17), 5778-5785  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 361524-16-5P

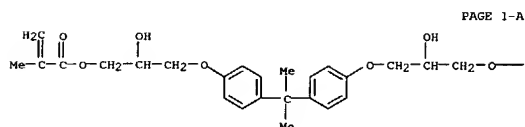
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (monomer; preparation and in polymerization of bismethacrylate monomers bearing aminoethylaminoethylpropyltrimethoxysilyl units)  
 RN 361524-16-5 CAPLUS  
 CN 14,17-Dioxo-4,7,10-triazadec-19-enoic acid, 19-methyl-4,7-bis[3-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]-3-oxopropyl]-13,18-dioxo-10-[3-(trimethoxysilyl)propyl]-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 16 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)  
 bismethacrylate monomers bearing various alkoxysilyl units/Bis-GMA/glass)  
 RN 361524-33-6 CAPLUS  
 CN 4,7-Dioxo-11,14-diazadec-1-en-17-oic acid, 2-methyl-11-[3-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]-3-oxopropyl]-3,8-dioxo-14-[3-(trimethoxysilyl)propyl]-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1  
 CRN 361524-13-2  
 CMF C35 H58 N2 O15 S1



CM 2  
 CRN 1565-94-2  
 CMF C29 H36 O8

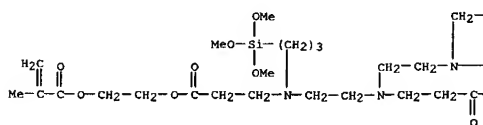


PAGE 1-A

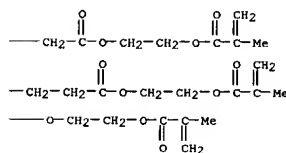


RN 361524-34-7 CAPLUS  
 CN 14,17-Dioxo-4,7,10-triazadec-19-enoic acid, 19-methyl-4,7-bis[3-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]-3-oxopropyl]-13,18-dioxo-10-[3-(trimethoxysilyl)propyl]-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, polymer with (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-

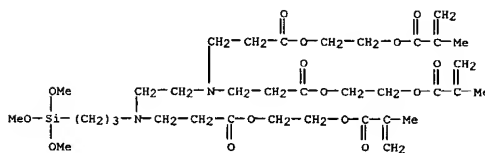
L4 ANSWER 16 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)  
 PAGE 1-A



PAGE 1-B



IT 361524-13-2P  
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (monomer; preparation and in polymerization of bismethacrylate monomers bearing aminoethylaminoethylpropyltrimethoxysilyl units)  
 RN 361524-13-2 CAPLUS  
 CN 4,7-Dioxo-11,14-diazadec-1-en-17-oic acid, 2-methyl-11-[3-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]-3-oxopropyl]-3,8-dioxo-14-[3-(trimethoxysilyl)propyl]-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)

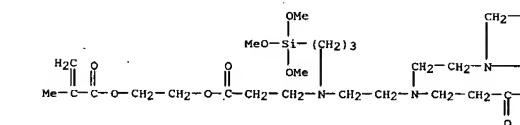


IT 361524-33-6P 361524-34-7P  
 RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (preparation and properties of matrix resins and composites from

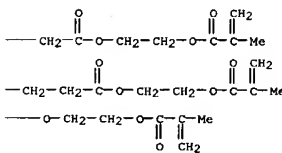
L4 ANSWER 16 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)  
 propanediyl]] bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

CM 1  
 CRN 361524-16-5  
 CMF C46 H75 N3 O19 S1

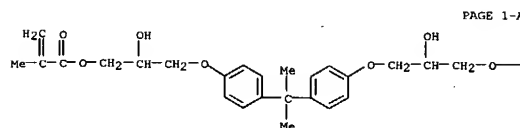
PAGE 1-A



PAGE 1-B



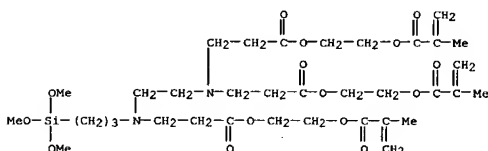
CM 2  
 CRN 1565-94-2  
 CMF C29 H36 O8



PAGE 1-A



IT 361524-24-5P 361524-25-6P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(synthesis and properties of polymers from bismethacrylate monomers  
bearing various alkoxyisilyl units by photopolymer.)  
361524-24-5 CAPLUS  
4,7-dioxo-1,14-disubseptadec-1-en-17-olc acid, 2-methyl-11-[3-[(2-  
methyl-1-oxo-2-propenyl)oxy]ethoxy]-3,8-dioxo-14-[3-  
(trimethoxysilyl)propyl]-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester,  
homopolymer (9C1) (CA INDEX NAME)  
CM 1  
CRN 361524-13-2  
CMF C35 H50 N2 O15 Si



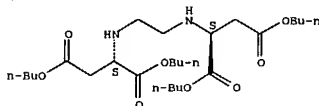
CRN	361524-25-6	CAPLUS
CN	14,17-Dioxo-4,7,10-triazacicos-19-enoic acid, 19-methyl-4,7-bis[3-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy]-3-oxopropyl]-13,18-dioxo-10-[3-(trimethoxysilyl)propyl]-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester, homopolymer (9CI)	{CA INDEX NAME}
CM	1	
CRN	361524-16-5	
CMF	C46 H75 N3 O19 Si	

14 ANSWER 17 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB Ethylenediaminedisuccinic acid tetra(C1-4 alkyl) esters are prepared by  
 reaction of ethylenediaminedisuccinic acid (I) with  $\geq 10$ -fold (by  
 mol) HCl-containing lower alcs. S,S-I was esterified with MeOH  
 containing 10 weight %  
 HCl at room temperature for 50 h to give 50% (by weight) S,S-I tetra-Me  
 ester.2HCl.  
 ACCESSION NUMBER: 2001:366090 CAPLUS  
 DOCUMENT NUMBER: 134:367196  
 TITLE: Preparation of ethylenediaminedisuccinic acid  
 tetraalkyl esters as intermediates for surfactants  
 Tsubone, Kazuyuki  
 INVENTOR(S): Kanebo, Ltd., Japan  
 PATENT ASSIGNEE(S): Jpn. Kokai Tokkyo Koho, 3 pp.  
 SOURCE: CODEN: JKKXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

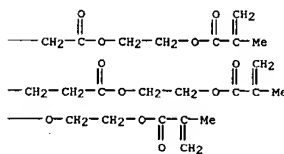
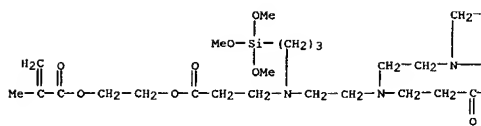
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001139530	A2	20010522	JP 1999-327888	19991118
PRIORITY APPLIN. INFO.:			JP 1999-327888	19991118

OTHER SOURCE(S): CASREACT 134:367196  
 IT 69812-79-9P  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of ethylenediaminedisuccinic acid tetraalkyl esters as intermediates for surfactants)  
 RN 69812-79-9 CRIUS  
 CN L-Aspartic acid, N,N'-1,2-ethanedithiol-, tetrabutyl ester, dihydrochloride, [NCl] .[CA INDEX NAME]

Absolute stereochemistry.



● 2 HCl



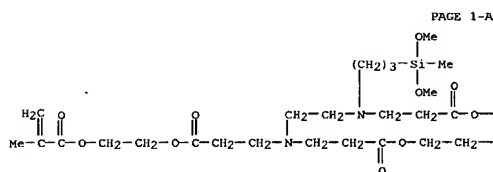
REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

14 ANSWER 18 OF 62 CAPLASU COPYRIGHT 2004 ACS ON STW  
AB The title macromonomers of mol. weight  $\geq 500$  g/mol containing siloxane groups, are used as polymerizable monomers in a dental/medical composite comprising further at least a polymerizable monomer, an organic or inorg. acid or an acidic monomer, a stabilizer, an initiator, pigments, and an organic or inorg. filler. The dental/medical composite is usable as a dental restorative material for filling and restoring teeth, making inlays and onlays, for artificial teeth, for sealing and surface modification materials, usable as temporary crown and bridge material. The macromonomers are used for filler surface modification, as precursors for siloxane condensation products or as precursor for preparation of nanoparticles containing active polymerizable moieties. Thus, a 3-aminopropylmethyldiethoxysilane adduct with ethylene glycol acrylate methacrylate was prepared and used as a coating agent for barium aluminosilicate glass. Sep., an activated dental composite resin was prepared by mixing Bis-GMA-triethylene glycol dimethacrylate-ethoxylated bisphenol A dimethacrylate-hexamethylenedisocyanate copolymer with 2-mercaptoethanol. The resulting activated resin was mixed with the above modified glass fillers to give a composite. The composites were tested for their mech. properties, such as compressive strength, flexural strength, consistency, and volumetric shrinkage.

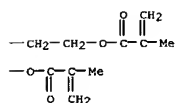
ACCESSION NUMBER: 134:152704  
DOCUMENT NUMBER: 134:152704  
TITLE: Siloxane-containing macromonomers and dental composites thereof  
INVENTOR(S): Klee, Joachim E.; Walz, Uwe; Fiedler, Jürgen; Mulhaupt, Rolf; Frey, Holger; Müh, Ekkehardt  
PATENT ASSIGNEE(S): Dentsply International Inc., USA  
SOURCE: PCT Int. Appl., 30 pp.  
CODEN: PIXX2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001008639	A1	20010208	WO 2000-US20348	20000726
WO 2001008639	C2	20020912		
W: JP, SE				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1200038	A1	20020502	EP 2000-950725	20000726
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
JP 2003050486	T2	20030212	JP 2001-513370	20000726
US 2003055167	A1	20030320	US 2002-213050	20020806
US 2004167296	A1	20040826	US 2004-791448	20040302
PRIORITY APPLN. INFO.:			US 1999-146093P	P 19990728
			US 2000-626200	A 20000726
			WO 2000-US20348	W 20000726
			US 2002-74725	A1 20020212
			US 2002-213050	B1 20020806

L4 ANSWER 18 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)  
 IT 324015-84-1P  
 RL: IMF (Industrial manufacture); PRP (Properties); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (siloxane-containing macromonomers for dental composites)  
 RN 324015-84-1 CAPLUS  
 CN 4,7-Dioxa-11,14-diazaheptadec-1-en-17-oic acid, 11-[3-(dimethoxymethylsilyl)propyl]-2-methyl-14-[3-{2-[(2-methyl-1-oxo-2-propenyl)oxy]ethoxy}-3-oxopropyl]-3,8-dioxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)



PAGE 1-B

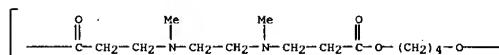


REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L4 ANSWER 19 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB Poly(β-amino esters) 1-3 were synthesized via the addition of N,N'-dimethylethylenediamine, piperazine, and 4,4'-trimethylenedipiperidine to 1,4-butanediol diacrylate. Polymerization proceeded exclusively via the conjugate addition of the secondary amines to the bis(acrylate ester). Polymers were isolated in up to 86% yields with mol. wts. ranging up to 31 200 relative to polystyrene stds. The polymers degraded hydrolytically in acidic and alkaline media to yield 1,4-butanediol and β-amino acids 4a-6a and the degradation kinetics were investigated at pH 5.1 and 7.4. In general, the polymers degraded more rapidly at pH 7.4 than at pH 5.1. In initial screening assays, both the polymers and their degradation products were determined to be noncytotoxic relative to poly(ethylene imine), a polymer conventionally employed as a synthetic transfection vector. Polymers 1-3 interacted electrostatically with polyanionic plasmid DNA in water and buffer at physiol. pH, as determined by agarose gel electrophoresis, quasi-elastic dynamic light scattering (QELS), and ζ-potential measurements. All three polymers condensed DNA into soluble DNA/polymer particles on the order of 50-200 nm. Particles formed from polymers 1 and 2 aggregated extensively, while particles formed from polymer 3 exhibited pos. ζ-potentials (e.g., +10 to +15 mV) and did not aggregate for up to 18 h. The nanometer-sized dimensions and reduced cytotoxicities of these DNA/polymer complexes suggest that these types of polymers may be useful as degradable polymeric gene transfer vectors.

ACCESSION NUMBER: 2000:733773 CAPLUS  
 DOCUMENT NUMBER: 134:29769  
 TITLE: Degradable Poly(β-amino esters): Synthesis, Characterization, and Self-Assembly with Plasmid DNA  
 AUTHOR(S): Lynn, David M.; Langer, Robert  
 CORPORATE SOURCE: Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA  
 SOURCE: Journal of the American Chemical Society (2000), 122(44), 10761-10768  
 CODEN: JACSAT; ISSN: 0002-7863  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 311310-00-6P  
 RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)  
 (synthesis and characterization of poly(β-amino esters))  
 RN 311310-00-6 CAPLUS  
 CN Poly[oxy-1,4-butanedioldyloxy(1-oxo-1,3-propanediyl)] (methylimino)-1,2-ethanedyl (methylimino) [3-oxo-1,3-propanediyl] (9CI) (CA INDEX NAME)

PAGE 1-A

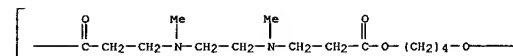


L4 ANSWER 19 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)

PAGE 1-B

IT 311310-00-6DP, DNA complex  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (synthesis and characterization of poly(β-amino esters))  
 RN 311310-00-6 CAPLUS  
 CN Poly[oxy-1,4-butanedioldyloxy(1-oxo-1,3-propanediyl)] (methylimino)-1,2-ethanedyl (methylimino) [3-oxo-1,3-propanediyl] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

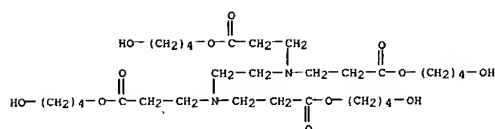
REFERENCE COUNT: 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L4 ANSWER 20 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB The comps. with good radiation curability while having the benefit of low viscosity, useful for ink and coating, are substituted diamines R2NZNR2 (Z = hydrocarbylene linking groups; R = groups bearing unsatd. terminals), which can be prepared by the Michael addition reaction of polyamine compound, e.g., 1,4-diaminobutane[4]:propylamine (4-cascade), with OH- or COOH-containing acrylic compound, followed by reacting with an unsatd. group-provider. Thus, heating ethylenediamine 20.1 with 4-hydroxybutyl acrylate 192.2, EtOAc 71, and MeOH 20 g at 75° for 3 h gave a Michael addition product which was esterified with acryloyl chloride to give a title compound

ACCESSION NUMBER: 2000:252046 CAPLUS  
 DOCUMENT NUMBER: 132:294128  
 TITLE: Vinyl group-containing polyfunctional compounds, their manufacture and use in radiation-curable resin compositions  
 INVENTOR(S): Kawashima, Miki; Shiono, Teruo; Nakamura, Minoru; Tanaka, Hiroaki  
 PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.  
 CODEN: JKKXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000109454	A2	20000418	JP 1998-281856	19981005
PRIORITY APPLN. INFO.:			JP 1998-281856	19981005

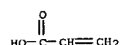
OTHER SOURCE(S): MARPAT 132:294128  
 IT 263904-67-2P 263916-76-3P 263916-77-4P  
 263916-82-1P  
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
 (crosslinker/monomers; manufacture of vinyl group-containing polyfunctional comps. for use in radiation-curable resin comps.)  
 RN 263904-67-2 CAPLUS  
 CN β-Alanine, N,N'-1,2-ethanedilylbis[N-[3-(4-hydroxybutoxy)-3-oxopropyl]-, bis(4-hydroxybutyl) ester, 2-propenoate (ester) (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 263903-49-7  
 CMF C30 H56 N2 O12



CM 2

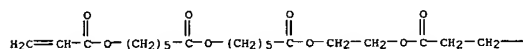
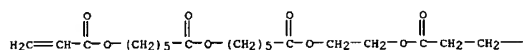
CRN 79-10-7

CMF C3 H4 O2

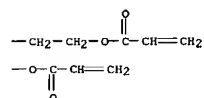


RN 263916-76-3 CAPLUS  
CN 11,14,21,28-Tetraoxa-4,7-diazahentriacont-30-enoic acid,  
10,15,22,29-tetraoxo-4,7-bis(3,8,15,22-tetraoxo-4,7,14,21-tetraoxatetracos-  
23-en-1-yl)-, 2-[[1-oxo-6-[[1-oxo-6-[[1-oxo-2-  
propenyl]oxy]hexyl]oxy]hexyl]oxy]ethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

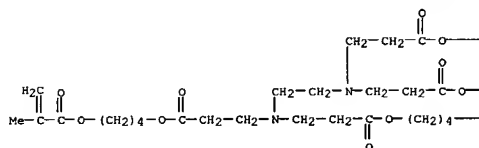


PAGE 1-B

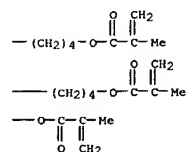


RN 263916-82-1 CAPLUS  
 CN 11,16-Dioxo-4,7-diazanonadec-18-enoic acid, 18-methyl-4,7-bis[3-[4-[(2-methyl-1-oxo-2-propenyl)oxy]butoxy]-3-oxopropyl]-10,17-dioxo-, 4-[(2-methyl-1-oxo-2-propenyl)oxy]butyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

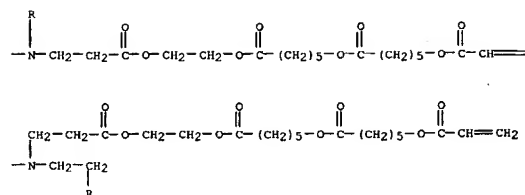


PAGE 1-B



```
IT 263903-49-7DP: mixed vinyl ethers
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);
RACT (Reactant or reagent)
polyfunctional: crosslinker; monomers; manufacture of vinyl group-containing
compds. for use in radiation-curable resin compns.)
RN 263903-49-7 CAPLUS
CN p-Xl-anine, N-[3-(3,5-dichlorophenyl)-N-[3-(4-hydroxybutoxy)-3-oxopropyl]-
acetamido], N-methyl-N-propylcarbamate, [ZIG] (CA INDEX NAME)
```

PAGE 1-B

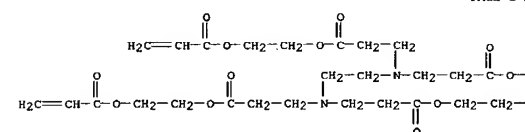


PAGE 1-C

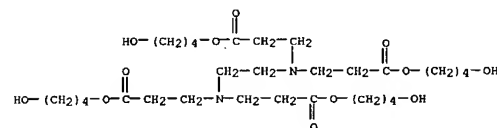


RN 263916-77-4 CAPLUS  
CN 4,7-Dioxo-11,14-diazaheptadec-1-en-17-oic acid,  
3,8-dioxo-11,14-bis[3-oxo-  
3-[2-[(1-oxo-2-propenyl)oxy]ethoxy]propyl]-, 2-[(1-oxo-2-  
propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

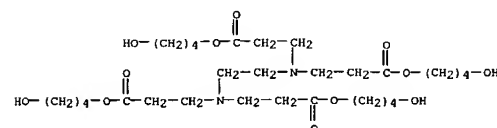


PAGE 1-B



IT 263903-49-7P, N,N,N,N'-Tetrakis[3-(4'-Hydroxybutyloxy)carbonyl ethyl  
ethylene]diamine  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);  
RACT (Reactant or reagent)  
(intermediate; Reactant of vinyl group-containing polyfunctional  
comps. for  
use in radiation-curable resin comps.)

RN 263903-49-7 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediylbis[N-(3-(4-hydroxybutoxy)-3-oxopropyl)-  
 , bis(4-hydroxybutyl) ester (9CI) (CA INDEX NAME)



TT 263916-83-2P 264130-90-7P, N,N,N',N'Tetrakis[(4-Hydroxybutyloxy)carbonylethyl]ethylenediamine acrylate ester homopolymer  
RL: IMF (Industrial manufacture); PRP (Properties); TSM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(manufacture of vinyl group-containing polyfunctional compds. for use

in  
radiation-curable resin compns.)

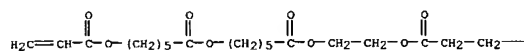
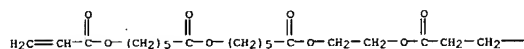
radiation-curable resin comps.)

RN 263916-83-2 CAPLUS

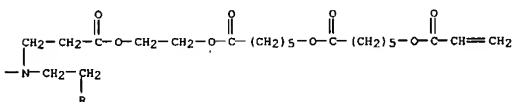
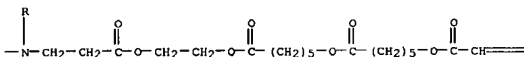
CN 11,14,21,28-Tetraoxa-4,7-diazahentriacont-30-enoic acid.

10,15,22,29-tetraoxo-4,7-bis(3,8,15,22-tetraoxo-4,7,14,21-tetraoxatetracos-23-en-1-yl)-, 2-[[1-oxo-6-[[1-oxo-6-[[1-oxo-2-propenyl]oxy]hexyl]oxy]hexyl]oxy]ethyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1  
CRN 263916-76-3  
CMF C02 H120 N2 O32



PAGE 1-B



PAGE 1-C



RN 264130-90-7 CAPLUS  
CN  $\beta$ -Alanine, N,N'-1,2-ethanediylbis[N-(3-(4-hydroxybutoxy)-3-oxopropyl)-  
bis(4-hydroxybutyl) ester, 2-propenoate (ester), homopolymer (9CI) (CA  
INDEX NAME)

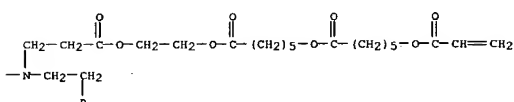
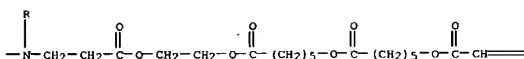
CM 1

CRN 263904-67-2  
CMF C30 H56 N2 O12 . x C3 H4 O2

CM 2

CRN 263903-49-7  
CMF C30 H56 N2 O12

PAGE 1-B

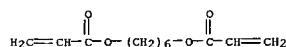


PAGE 1-C



CM 2

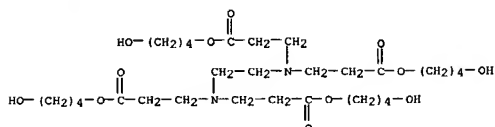
CRN 13048-33-4  
CMF C12 H18 O4



RN 263916-86-5 CAPLUS  
CN 11,14,21,28-Tetraoxa-4,7-diazahentriacont-30-enoic acid,  
10,15,22,29-tetraoxo-4,7-bis(3,8,15,22-tetraoxo-4,7,14,21-tetraoxatetracos-  
23-en-1-yl)-, 2-[[1-oxo-6-[[1-oxo-6-[[1-oxo-2-  
propenyl]oxy]hexyl]oxy]hexyl]oxy]ethyl ester, polymer with  
[1-methyl-1,2-ethanediyl]bis[oxymethyl-1,2-ethanediyl] di-2-propenoate  
(9CI) (CA INDEX NAME)

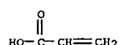
CM 1

CRN 263916-76-3  
CMF C82 H128 N2 O32



CM 3

CRN 79-10-7  
CMF C3 H4 O2



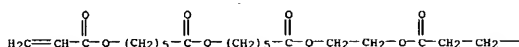
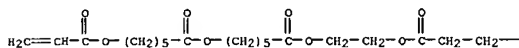
IT 263916-85-4 263916-86-5 264130-92-9  
264130-93-0  
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or  
engineered material use); USES (Uses)  
[manufacture of vinyl group-containing polyfunctional compds. for use  
in radiation-curable resin compns.)

RN 263916-85-4 CAPLUS  
CN 11,14,21,28-Tetraoxa-4,7-diazahentriacont-30-enoic acid,  
10,15,22,29-tetraoxo-4,7-bis(3,8,15,22-tetraoxo-4,7,14,21-tetraoxatetracos-  
23-en-1-yl)-, 2-[[1-oxo-6-[[1-oxo-6-[[1-oxo-2-  
propenyl]oxy]hexyl]oxy]hexyl]oxy]ethyl ester, polymer with 1,6-hexanediyl  
di-2-propenoate (9CI) (CA INDEX NAME)

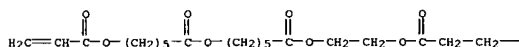
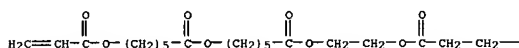
CM 1

CRN 263916-76-3  
CMF C82 H128 N2 O32

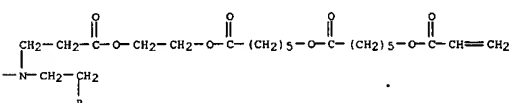
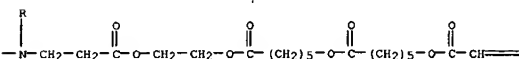
PAGE 1-A



PAGE 1-A



PAGE 1-B

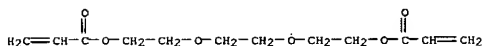


PAGE 1-C



CM 2

CRN 42978-66-5  
CMF C15 H24 O6  
CCI IDS

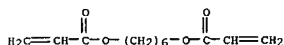


3 (D1-Me)

RN 264130-92-9 CAPLUS  
CN 2-Propenoic acid, 1,6-hexanediyl ester, polymer with N,N'-1,2-ethanediybis[N-[3-(4-hydroxybutoxy)-3-oxopropyl]-β-alanine] bis(4-hydroxybutyl) ester 2-propenoate (ester) (9CI) (CA INDEX NAME)

CM 1

CRN 13048-33-4  
CMF C12 H18 O4

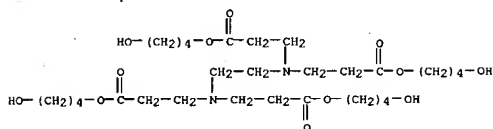


CM 2

CRN 263904-67-2  
CMF C30 H56 N2 O12 . x C3 H4 O2

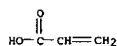
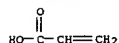
CM 3

CRN 263903-49-7  
CMF C30 H56 N2 O12



CM 4

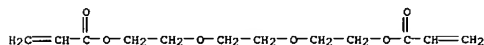
CRN 79-10-7  
CMF C3 H4 O2



RN 264130-93-0 CAPLUS  
CN 2-Propenoic acid, (1-methyl-1,2-ethanediybis[oxy(methyl-2,1-ethanediy)]) ester, polymer with N,N'-1,2-ethanediybis[N-[3-(4-hydroxybutoxy)-3-oxopropyl]-β-alanine] bis(4-hydroxybutyl) ester 2-propenoate (ester) (9CI) (CA INDEX NAME)

CM 1

CRN 42978-66-5  
CMF C15 H24 O6  
CCI IDS



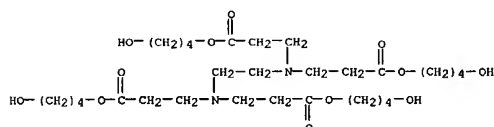
3 (D1-Me)

CM 2

CRN 263904-67-2  
CMF C30 H56 N2 O12 . x C3 H4 O2

CM 3

CRN 263903-49-7  
CMF C30 H56 N2 O12



CM 4

CRN 79-10-7  
CMF C3 H4 O2

AB Inhibitors contain 22 tertiary amine groups and 22 polymerizable unsatd. groups. Thus, 1:4 ethylenediamine and hydroxybutyl acrylate reacted to give a Michael adduct, esterified with acrylic acid chloride to give a polyacrylate, coated on a film, and cured with electron beam to form a coating.

ACCESSION NUMBER: 2000:249553 CAPLUS  
DOCUMENT NUMBER: 132:280617

TITLE: Reactive oxygen retardant inhibitors and curable compositions containing them and methods of formation of coatings containing them and cured products  
INVENTOR(S): Kawashima, Miki; Shiono, Teruo; Nakamura, Minoru; Tanaka, Hiroaki  
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 20 pp.  
CODEN: JKKXAF

DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000109828	A2	20000418	JP 1998-284322	19981006
PRIORITY APPLN. INFO.: JP 1998-284322 19981006				

IT 263903-49-7P

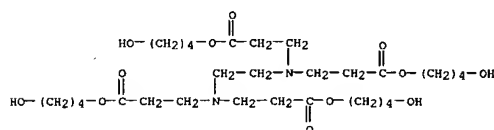
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);

RACT

(Reactant or reagent)  
(manufacture of polyfunctional compds. containing tertiary amine groups and polymerizable unsatd. groups for reactive oxygen retardant inhibitors for electron beam-curable coatings)

RN 263903-49-7 CAPLUS

CN β-Alanine, N,N'-1,2-ethanediybis[N-[3-(4-hydroxybutoxy)-3-oxopropyl]-, bis(4-hydroxybutyl) ester (9CI) (CA INDEX NAME)



IT 263904-67-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(manufacture of polyfunctional compds. containing tertiary amine groups and polymerizable unsatd. groups for reactive oxygen retardant inhibitors for electron beam-curable coatings)

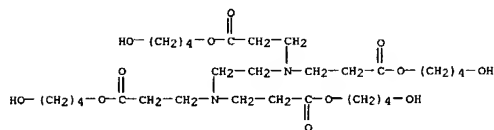
RN 263904-67-2 CAPLUS

CN β-Alanine, N,N'-1,2-ethanediybis[N-[3-(4-hydroxybutoxy)-3-oxopropyl]-

L4 ANSWER 21 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
AB bis(4-hydroxybutyl) ester, 2-propenoate (ester) (9CI) (CA INDEX NAME)

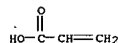
CM 1

CRN 263903-49-7  
CMF C30 H56 N2 O12



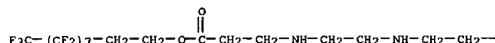
CM 2

CRN 79-10-7  
CMF .C3 H4 O2

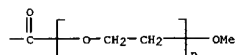


L4 ANSWER 22 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L4 ANSWER 22 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Aqueous treating agents for a substrate comprise compds. with pendant saturated

perfluoroalkyl groups, where some of the perfluoroalkyl groups are straight chain and some are branched chain; and applying the polymer to the substrate; where 60-90% of the perfluoroalkyl groups are straight chain and .apprx.10-40% of the perfluoroalkyl groups are branched chain.

ACCESSION NUMBER: 2000:238068 CAPLUS

DOCUMENT NUMBER: 132:266766

TITLE: Straight-chain and branched perfluoroalkyl halides and

derivatives, their preparation, fluoropolymers, and use as oil- and water-repellant treatment agents for surfaces

INVENTOR(S): Behr, Frederick E.; Dams, Rudolf J.; Dewitte, Johan E.; Hagen, Donald F.

PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA

SOURCE: U.S., 22 pp., Cont.-in-part of U.S. Ser. No. 723,049, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6048952	A	20000411	US 1997-794798	19970204
JP 2002138078	A2	20020514	JP 2001-204928	19920710
US 6365769	B1	20020402	US 2000-504483	20000215
PRIORITY APPLN. INFO.:			US 1991-728184	B1 19910710
			US 1994-314939	B3 19940929
			US 1995-476954	B1 19950607
			US 1996-723049	B2 19960930
			JP 1992-183345	A3 19920710
			US 1997-794798	A3 19970204

IT 218462-62-59

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(straight-chain and branched perfluoroalkyl halides and deriva. for

use as oil- and water-repellent treatment agents for fabrics and other surfaces)

RN 218462-62-5 CAPLUS

CN Poly(oxy-1,2-ethanediyl)-n-[(3-[(3-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl)oxy]-3-oxopropyl)amino]ethyl)amino]-1-oxopropyl]-n-methoxy- (9CI) (CA INDEX NAME)

L4 ANSWER 23 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN

AB Crosslinking agents with high reactivity for polyurethanes are

manufactured by Michael addition reaction of unsatd. poly- or monofunctional esters with monoamines or their salts containing OH and(or) SH groups and by Michael addition

reaction of unsatd. esters containing OH and(or) SH groups in the alkyl group

with polyamines or their salts. A typical crosslinker was manufactured by

reaction of 1 mol Laroma 8863 (polyethylene glycol trimethylolpropane triacrylate ether) with 3 mol diisopropanolamine 2 h at 40°.

ACCESSION NUMBER: 1999:521478 CAPLUS

DOCUMENT NUMBER: 131:158370

TITLE: Michael's addition products as crosslinking agents for

polyurethanes  
Bauer, Stephan; Weingart, Franz; Paulus, Wolfgang; Knorr, Gottfried; Biedermann, Anja

PATENT ASSIGNEE(S): BASF A.-G., Germany

SOURCE: Ger. Offen., 16 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19805136	A1	19990812	DE 1998-19805136	19980209
PRIORITY APPLN. INFO.:			DE 1998-19805136	19980209

OTHER SOURCE(S): MARPAT 131:158370

IT 237402-24-39

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

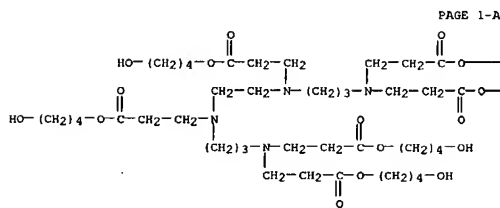
(Michael's addition products of amines and unsatd. esters as

crosslinking agents for polyurethanes)

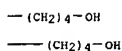
RN 237402-24-3 CAPLUS

CN 4,8,11,15-Tetraaazaoctadecanedioic acid, 4,8,11,15-tetrakis[3-(4-hydroxybutoxy)-3-oxopropyl]-, bis(4-hydroxybutyl) ester (9CI) (CA INDEX NAME)



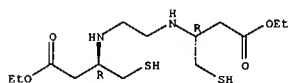


PAGE 1-B

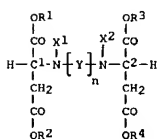


REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

L4 ANSWER 24 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Bis-amine bis-thiol tetra-ligands such as ethylene dicysteine (EC) and  
 its di-Et ester (ECD) bind <sup>99m</sup>Tc efficiently at room temperature and neutral  
 to alkaline pH to form stable complexes. The use of bis-amine bis-thiol ligands as  
 bifunctional chelating agents (BCAs) for labeling of bioactive compds.  
 (peptides, diphosphonates, etc.) looks promising. To study the effect of  
 extending the carboxylic side-group in <sup>99m</sup>Tc-L,L-EC and <sup>99m</sup>Tc-L,L-ECD,  
 the authors have synthesized ethylene bis-L-β-homocysteine (L,L-EhC) and  
 its di-Et ester derivative L,L-EhCD, incorporating a methylene group  
 between each of the carboxyl groups and the N2S2 tetra-ligand core. The more  
 distant carboxyl groups could offer reduced steric hindrance in the use  
 of L,L-EhC and L,L-EhCD as BCAs. As for <sup>99m</sup>Tc-L,L-ECD, <sup>99m</sup>Tc-L,L-EhCD is  
 neutral on electrophoresis at pH 6.0. In mice, brain uptake of  
<sup>99m</sup>Tc-L,L-EhCD is lower the <sup>99m</sup>Tc-L,L-ECD. Blood clearance of the two  
 complexes is similar. The diacid <sup>99m</sup>Tc-L,L-EhC migrates to the same  
 extent as the corresponding <sup>99m</sup>Tc-L,L-EC on electrophoresis at pH 3.2,  
 9.0 and 12, but it migrates 25% further at pH 6. Urine levels for  
<sup>99m</sup>Tc-L,L-EhC in mice are lower than those for <sup>99m</sup>Tc-L,L-EC (65% vs. 74%  
 of I.D. at 10 min p.i. and 85% vs. 95% at 30 min p.i., resp.). The  
 results show that the β-homocysteine derivs. retain the key  
 characteristics of <sup>99m</sup>Tc-L,L-EC and <sup>99m</sup>Tc-L,L-ECD, i.e. easy formation of  
 stable complexes with <sup>99m</sup>Tc, a high urinary excretion for <sup>99m</sup>Tc-L,L-EhC,  
 and in the case of <sup>99m</sup>Tc-L,L-EhCD a neutral compound with appreciable  
 brain uptake. These properties indicate that L,L-EhC and L,L-EhCD merit  
 further evaluation as BCAs with attractive conjugation properties.  
 ACCESSION NUMBER: 1999:512218 CAPLUS  
 DOCUMENT NUMBER: 131:286782  
 TITLE: Synthesis and evaluation of β-homocysteine  
 derivatives of <sup>99m</sup>Tc-L,L-EC and <sup>99m</sup>Tc-L,L-ECD  
 AUTHOR(S): Mang'era, K. O.; Verbruggen, A.  
 CORPORATE SOURCE: Laboratory of Radiopharmaceutical Chemistry, K.U.  
 Leuven, Louvain, B-3000, Belg.  
 SOURCE: Journal of Labelled Compounds & Radiopharmaceuticals  
 (1999), 42(7), 683-699  
 CODEN: JLCRD4; ISSN: 0362-4803  
 PUBLISHER: John Wiley & Sons Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 154147-85-ODP, <sup>99m</sup>Tc-complex  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and evaluation of as radiopharmaceuticals)  
 RN 154147-85-0 CAPLUS  
 CN Butanoic acid, 3,3'-(1,2-ethanediyldiimino)bis[4-mercapto-, diethyl  
 ester, (3R,3'R)-(9CI) (CA INDEX NAME)  
 Absolute stereochemistry.



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT



AB Diester amine adducts ((I) wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> are each independently  
 of one another C<sub>4</sub>-C<sub>22</sub>alkyl; C<sub>2</sub>-C<sub>22</sub>alkenyl; or C<sub>5</sub>-C<sub>7</sub>cycloalkyl; X<sub>1</sub> and X<sub>2</sub>  
 are each independently of the other hydrogen, C<sub>1</sub>-C<sub>4</sub>alkyl;  
 C<sub>2</sub>-C<sub>4</sub>hydroxyalkyl or C<sub>2</sub>-C<sub>4</sub>hydroxyhaloalkyl; Y is a radical of formula  
 -(Al)ml-1(N(X<sub>3</sub>))p-; A<sub>1</sub> is C<sub>2</sub>-C<sub>3</sub>alkylene or 2-hydroxy-n-propylene; X<sub>3</sub> is  
 hydrogen; C<sub>1</sub>-C<sub>4</sub>alkyl, C<sub>2</sub>-C<sub>4</sub>hydroxyalkyl; or C<sub>2</sub>-C<sub>4</sub>hydroxyhaloalkyl; (C) is  
 an asym. carbon atom in the R- or S-configuration, wherein, if C<sub>1</sub>=R,  
 C<sub>2</sub>=R;  
 C<sub>1</sub>=S, C<sub>2</sub>=S; and C<sub>1</sub>=R; C<sub>2</sub>=S; ml is 1 or 2; and n is an integer from 1 to  
 4;  
 p is 0 or 1), which may be in the form of free bases or ammonium salts,  
 were prepared and tested for antibacterial effect. Said compds. are  
 precursors of compds. having good complex-forming properties and are thus  
 able to effectively bind heavy metal ions such as iron, zinc, magnesium  
 or copper ions and to prevent metal-initiated oxidns. after enzymic or  
 chemical cleavage. They have a plurality of uses, for example in foods,  
 beverages,  
 derusting and decalcification baths, as additives in liqs. for  
 cooling-water circuits, in personal-care products, as bleaching  
 stabilizers, in cleaning agents and detergents, in the textile industry  
 and also as soft handle agents for organic fiber materials. Thus,  
 2-ethyl-1-hexanol was reacted with the acid chloride (generated in situ)  
 of (S,S)-ethylenediaminedisuccinic acid to give, after workup, 73%  
 (S,S)-I  
 (R<sub>1</sub>-R<sub>4</sub> = CH<sub>2</sub>CH(CH<sub>2</sub>CH<sub>3</sub>)(CH<sub>2</sub>)<sub>3</sub>CH<sub>3</sub>; X<sub>1</sub>-X<sub>2</sub> = H; Y = CH<sub>2</sub>; n = 2) (II). In  
 growth-inhibition tests using Staphylococcus aureus ATCC 9144,  
 Corynebacterium xerosis ATCC 373, and Escherichia coli NCTC 8196, II (and  
 the non-stereo-specific form of II) both showed inhibition of C. xerosis  
 at 1% in ETOH.  
 ACCESSION NUMBER: 1999:325896 CAPLUS  
 DOCUMENT NUMBER: 130:338391  
 TITLE: Preparation and use of N,N'-alkylenediaminedisuccinic  
 acid tetra-esters  
 INVENTOR(S): Ehliis, Thomas; Fankhauser, Peter; Huglin, Dietmar  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
 SOURCE: PCT Int. Appl., 27 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9924392	A1	19990520	WO 1998-EP6811	19981027
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, BG, KZ, MD, RU, TJ, TM			
TM				
	RM: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AU 9920478	A1	19990531	AU 1999-20478	19981027
AU 751838	B2	20020829		
EP 1028939	A1	20000823	EP 1998-965144	19981027
R:	CH, DE, DK, ES, FR, GB, IT, LI			
BR 9813987	A	20000926	BR 1998-13987	19981027
JP 2001522827	T2	20011120	JP 2000-520406	19981027
NZ 504290	A	20020828	NZ 1998-504290	19981027
RU 2189972	C2	20020927	RU 2000-111550	19981027
US 6369268	B1	20020409	US 2000-530537	20000501
PRIORITY APPLN. INFO.:			EP 1997-810833	A 19971106
			WO 1998-EP6811	W 19981027

## OTHER SOURCE(S):

MARPAT 130:338391

IT 223751-02-0P 223751-03-9P 223751-04-0P

223751-05-1P 223927-01-9P 223927-04-2P

RL: BAC (Biological activity or effector, except adverse); BSU

(Biological

study, unclassified); IMF (Industrial manufacture); SPN (Synthetic

preparation); BIOL (Biological study); PREP (Preparation)

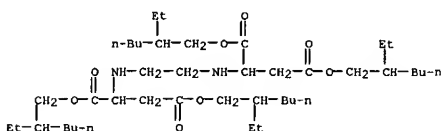
(preparation and biol. activity of)

RN 223751-02-8 CAPLUS

CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrakis(2-ethylhexyl) ester

(9CI)

(CA INDEX NAME)



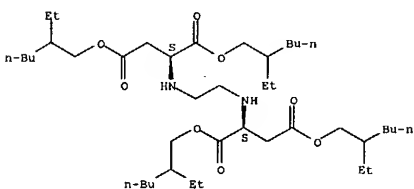
RN 223751-03-9 CAPLUS

CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrakis(1-methylethyl) ester

(9CI)

(CA INDEX NAME)

Absolute stereochemistry.



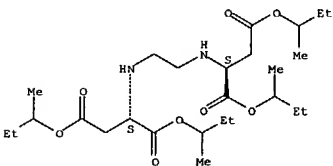
RN 223927-84-2 CAPLUS

CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrakis(1-methylpropyl) ester

(9CI)

(CA INDEX NAME)

Absolute stereochemistry.



IT 1115-44-2P 223750-98-9P 223750-99-0P

223751-00-6P 223751-01-7P 223927-79-5P

RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic

preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of in the synthesis of bridged tetra-ester

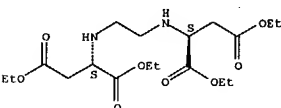
diamines)

RN 1115-44-2 CAPLUS

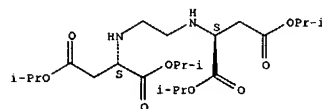
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetraethyl ester (9CI) (CA

INDEX NAME)

Absolute stereochemistry.



RN 223750-98-9 CAPLUS

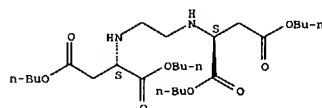


RN 223751-04-0 CAPLUS

CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrabutyl ester (9CI) (CA

INDEX NAME)

Absolute stereochemistry.

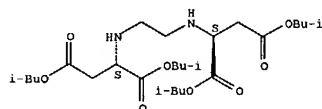


RN 223751-05-1 CAPLUS

CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrakis(2-methylpropyl) ester

(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 223927-81-9 CAPLUS

CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrakis(2-ethylhexyl) ester

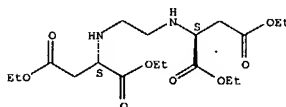
(9CI) (CA INDEX NAME)

Absolute stereochemistry.

CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetraethyl ester, hydrochloride

(9CI) (CA INDEX NAME)

Absolute stereochemistry.



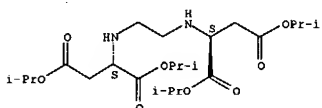
● x HCl

RN 223750-99-0 CAPLUS

CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrakis(1-methylethyl) ester,

hydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



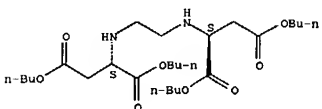
● x HCl

RN 223751-00-6 CAPLUS

CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrabutyl ester, hydrochloride

(9CI) (CA INDEX NAME)

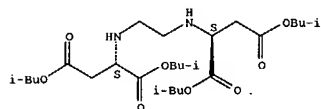
Absolute stereochemistry.



● x HCl

L4 ANSWER 25 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)  
 RN 223751-01-7 CAPLUS  
 CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrakis(2-methylpropyl) ester, hydrochloride (9CI) (CA INDEX NAME)

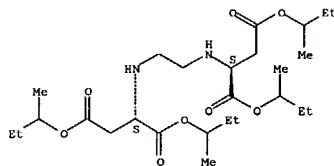
Absolute stereochemistry.



• x HCl

RN 223927-79-5 CAPLUS  
 CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrakis(1-methylpropyl) ester, hydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



• x HCl

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

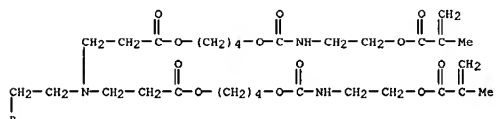
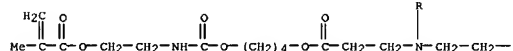
L4 ANSWER 26 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB The title compound is obtainable by reacting a core compound obtainable from a Michael addition reaction of polyamino compound (a) having at least one primary or secondary amino group and an active-hydrogen-containing (meth)acrylic compound (b-1), with a vinyl-group-containing compound (c) having a functional group reactable with the active hydrogen, and is useful as a film forming material such as a coating composition or an ink or as a resin for a sealant, a molding material, an adhesive or tackiness agent or for use as a curing agent or a reactive diluent for a curable composition  
 ACCESSION NUMBER: 1999:156374 CAPLUS  
 DOCUMENT NUMBER: 130:210363  
 TITLE: Multi-branched compounds and curable composition  
 INVENTOR(S): Kawashima, Miki; Nakamura, Minoru; Tanaka, Hiroaki  
 PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 47 pp.  
 CODEN: EPKXLDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 899287	A1	19990303	EP 1998-307012	19980901
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 11140042	A2	19990525	JP 1997-322527	19971125
JP 3353677	B2	20021203		
JP 2002187947	A2	20020705	JP 2001-313803	19971125
JP 2000026597	A2	20000125	JP 1999-166177	19980803
JP 11193325	A2	19990721	JP 1998-225498	19980810
JP 3022497	B2	20000321		
JP 11193321	A2	19990721	JP 1998-225499	19980810
JP 2970664	B2	19991102		
US 6136943	A	20001024	US 1998-144220	19980831
JP 2000119392	A2	20000425	JP 1999-24243	19990201
PRIORITY APPLN. INFO.:			JP 1997-235743	A 19970901
			JP 1997-242261	A 19970908
			JP 1997-293697	A 19971027
			JP 1997-293698	A 19971027
			JP 1997-322527	A 19971125
			JP 1998-20749	A 19980202
			JP 1997-295967	A 19971028
			JP 1998-218759	A3 19980803
			JP 1998-225497	A 19980810

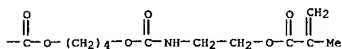
IT 220869-92-1P 220903-29-7P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation);  
 RACT

L4 ANSWER 26 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)  
 (Reactant or reagent)  
 (multi-branched compds. and curable compn.)  
 RN 220869-92-1 CAPLUS  
 CN 4,9,14-Trioxa-7,18,21-triazatetracos-1-en-24-olc acid, 2-methyl-18,21-bis(16-methyl-3,10,15-trioxo-4,9,14-trioxo-11-azaheptadec-16-en-1-yl)-3,8,15-trioxo-, 4-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]amino]carbonyl]oxy]butyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

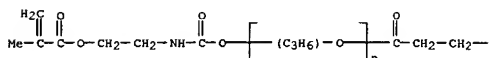


PAGE 1-B



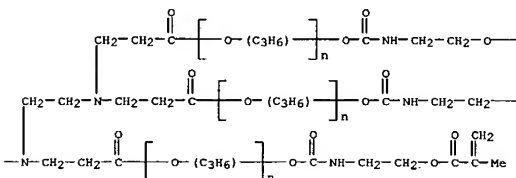
RN 220903-29-7 CAPLUS  
 CN Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha,\alpha',\alpha'',\alpha'''$ -[1,2-ethanediylbis[nitrilobis(1-oxo-3,1-propanediyl)]]tetrakis[m-[[[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]amino]carbonyl]oxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



L4 ANSWER 26 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)

PAGE 1-B



PAGE 1-C



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

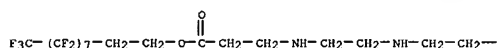
L4 ANSWER 27 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB A method for treating a substrate, comprises: providing a substrate; providing a polymer comprising a plurality of pendant saturated perfluoroalkyl groups, wherein some of the perfluoroalkyl groups are straight chain and some are branched chain; and applying the polymer to the substrate; wherein 65-85% of the perfluoroalkyl groups are straight chain and about 15 to about 35% of the perfluoroalkyl groups are branched chain. These mixts. contain some compds. with a straight perfluoroalkyl group and some with a branched perfluoroalkyl group. Methods of preparation and use are also described.

ACCESSION NUMBER: 1999:12326 CAPLUS  
 DOCUMENT NUMBER: 130:83186  
 TITLE: Perfluoroalkyl halides and derivatives for surface treatment  
 INVENTOR(S): Behr, Frederick E.; Dams, Rudolf J.; Dewitte, Johan E.; Hagen, Donald F.  
 PATENT ASSIGNEE(S): Minnesota Mining & Manufacturing Company, USA  
 SOURCE: U.S., 22 pp., Cont.-in-part of U.S. Ser. No. 489,094, abandoned  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5852148	A	19981222	US 1997-794828	19970204
JP 2002138078	A2	20020514	JP 2001-204928	19920710
PRIORITY APPLN. INFO.:			US 1991-728184	B1 19910710
			US 1994-314939	B3 19940929
			US 1995-489094	B2 19950609
			JP 1992-183345	A3 19920710

IT 218462-62-5P  
 RL: IMP (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (perfluoroalkyl halides and derivs. for surface treatment)  
 RN 218462-62-5 CAPLUS  
 CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -[3-[[2-[[3-[[3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl]oxy]-3-oxopropyl]amino]ethyl]amino]-1-oxopropyl]- $\alpha$ -methoxy- (9CI) (CA INDEX NAME)

PAGE 1-A

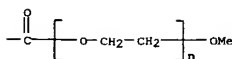


L4 ANSWER 28 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Chemical models of active sites of diiron oxo proteins were synthesized. The polydentate ligands are EDTA derivs. which provide a balanced supply of nitrogen atoms and carboxylate groups together with an oxidizable Ph moiety, thus mimicking both the iron coordination in methane monooxygenase and a nearby substrate site. All the diferric complexes were characterized in solution by ESI-MS, optical absorption, and in some cases by 1H NMR. In the case of the ligand L1 (N,N'-bis(3,4,5-trimethoxybenzyl)ethylenediamine N,N'-diacetic acid), the x-ray structure (tetragonal, space group I41/a, R(F) = 0.109) of the corresponding iron complex was determined, revealing an original tetranuclear unit, Fe4O2(L1)4·10H2O, issued from the dimerization of two [Fe2O(L1)2] units linked by carboxylate bridges. In a solution containing water or acetate, the tetranuclear complex decomposed into dinuclear complexes, which proved to be able to react with hydrogen peroxide or dioxygen in the presence of ascorbate. The final product was a mononuclear complex identified as [Fe(III)L1(H2O)] with L1 resulting from the quant. hydroxylation of L1. The complex and the oxidized ligand were characterized by EPR, NMR, and UV-visible spectroscopies and by mass spectrometry. Labeling expts. showed that with both H2O2 or O2 and ascorbate, the incorporated oxygen came from the oxidant exclusively. This reaction mimics the transformation of a tyrosine residue, brought into proximity of the active center of Ribonucleotide reductase of Escherichia coli by site-directed mutagenesis, into 3,4-dihydroxyphenylalanine.

ACCESSION NUMBER: 1998:814061 CAPLUS  
 DOCUMENT NUMBER: 130:118594  
 TITLE: O2 Activation and Aromatic Hydroxylation Performed by Diiron Complexes  
 AUTHOR(S): Menage, Stephane; Galey, Jean-Baptiste; Dumats, Jacqueline; Russler, Georges; Selite, Michel; Luneau, Isabelle; Gautier, Chottard, Genevieve; Pontecave, Marc  
 CORPORATE SOURCE: Laboratoire de Chimie et Biochimie des Centres Redox Biologiques, DBMS-CEA Grenoble/EP 1087 CNRS/Universite Joseph Fourier, Grenoble, 38054, Fr.  
 SOURCE: Journal of the American Chemical Society (1998), 120(51), 13370-13382  
 CODEN: JACSAT; ISSN: 0002-7863  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 19294-22-5P, Ethylenediamine N,N'-dipropionic acid diethyl ester  
 219686-70-1P, N,N'-Bis(3,4,5-trimethoxybenzyl)ethylenediamine-N,N'-dipropionic acid diethyl ester  
 RL: RCT (Reactant); SFN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (for preparation of EDTA analog polydentate ligand)  
 RN 19294-22-5 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediybis-, diethyl ester (9CI) (CA INDEX NAME)

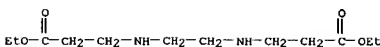
L4 ANSWER 27 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-B

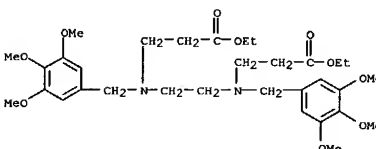


REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

L4 ANSWER 28 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



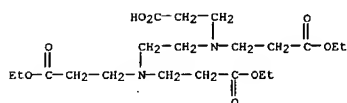
RN 219686-70-1 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediybis[N-[(3,4,5-trimethoxyphenyl)methyl]-, diethyl ester (9CI) (CA INDEX NAME)



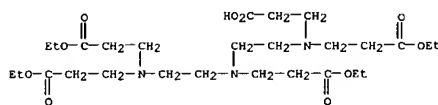
REFERENCE COUNT: 66 THERE ARE 66 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

L4 ANSWER 29 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Poly[(ethoxycarbonyl)methyl- and -ethyl]amines were selectively  
 hydrolyzed  
 to the corresponding monoacids using pig liver esterase in moderate to  
 good yields. For example, the tetra-Et ester of EDTA is hydrolyzed to  
 the  
 corresponding monoacid using PLE at pH 8 in 4.5 h in 86% yield. Enzymic  
 hydrolysis provides ready access to this important class of synthetic  
 intermediates.

ACCESSION NUMBER: 1998:742868 CAPLUS  
 DOCUMENT NUMBER: 130:66189  
 TITLE: Selective monohydrolysis of esters of  
 polyaminocarboxylic acids using pig liver esterase  
 AUTHOR(S): Burks, Eric; Koshti, Nirmal; Jacobs, Hollie; Gopalan,  
 Aravamudan  
 CORPORATE SOURCE: Department Chemistry Biochemistry, New Mexico State  
 University, Las Cruces, NM, 88003, USA  
 SOURCE: Synlett (1998), (11), 1285-1287  
 CODEN: SYNLES; ISSN: 0936-5214  
 PUBLISHER: Georg Thieme Verlag  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 130:66189  
 IT 217653-48-0 217653-61-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (selective monohydrolysis of esters of amino polycarboxylates by pig  
 liver esterase)  
 RN 217653-48-0 CAPLUS  
 CN  $\beta$ -Alanine, N-[2-bis(3-ethoxy-3-oxopropyl)amino]ethyl-N-(2-  
 carboxyethyl)-, 1-ethyl ester (9CI) (CA INDEX NAME)

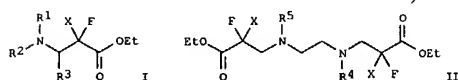


RN 217653-61-7 CAPLUS  
 CN 3-Oxa-7,10,13-triazahexadecan-16-oic acid,  
 7-(2-carboxyethyl)-10,13-bis(3-  
 ethoxy-3-oxopropyl)-4-oxo-, 16-ethyl ester (9CI) (CA INDEX NAME)



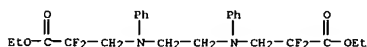
IT 217653-97-9P 217654-02-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (selective monohydrolysis of esters of amino polycarboxylates by pig  
 liver esterase)

L4 ANSWER 30 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 GI

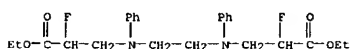


AB Mono- and difluoro- $\beta$ -amino esters I ( $\text{R}^1 = \text{Ph}$ ,  $\text{R}^2 = \text{H}$ , Me, Ph;  $\text{R}^1 = \text{R}^2 = \text{PhCH}_2$ ;  $\text{R}^3 = \text{H}$ ,  $\text{CHMe}_2$ ,  $\text{CH}_2\text{CH}_2\text{Ph}$ ;  $\text{X} = \text{F}$ , H) were synthesized via  
 Reformatsky reaction of fluorinated Et bromoacetates  $\text{BrCXFCO}_2\text{Et}$  with  
 N-( $\alpha$ -aminoalkyl)benzotriazoles  $\text{BtCHR}_3\text{NR}^1\text{R}^2$  ( $\text{Bt} = \text{benzotriazolyl}$ ).  
 Secondary and tertiary amines are easily formed, but primary amines can  
 only be made in the difluorinated case. This approach has led to the  
 first synthesis of di- and tetrafluorinated bis( $\beta$ -amino esters) II  
 ( $\text{R}^4 = \text{R}^5 = \text{Ph}$ ;  $\text{R}^4\text{R}^5 = \text{CH}_2\text{CH}_2$ ).

ACCESSION NUMBER: 1998:603920 CAPLUS  
 DOCUMENT NUMBER: 129:302824  
 TITLE: Benzotriazole mediated syntheses of  
 $\alpha$ -fluoro- $\beta$ -amino esters  
 AUTHOR(S): Katritzky, Alan R.; Nichols, Daniel A.; Qi, Ming  
 CORPORATE SOURCE: Cent. Heterocyclic Compounds, Dep. Chem., Univ.  
 Florida, Gainesville, FL, 32611-7200, USA  
 SOURCE: Tetrahedron Letters (1998), 39(39), 7063-7066  
 CODEN: TELEAY; ISSN: 0040-4039  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 129:302824  
 IT 214401-16-9P 214401-17-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of fluoro amino esters via Reformatsky reaction of  
 (aminoalkyl)benzotriazoles and bromofluoroacetates)  
 RN 214401-16-8 CAPLUS  
 CN Propanoic acid, 3,3'-[1,2-ethanediylbis(phenylimino)]bis[2,2-difluoro-,  
 diethyl ester (9CI) (CA INDEX NAME)

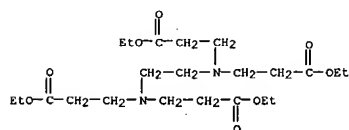


RN 214401-17-9 CAPLUS  
 CN Propanoic acid, 3,3'-[1,2-ethanediylbis(phenylimino)]bis[2-fluoro-,  
 diethyl ester (9CI) (CA INDEX NAME)

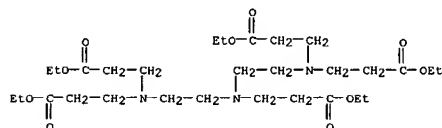


REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR  
 THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE

L4 ANSWER 29 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 RN 217653-97-9 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediylbis[N-(3-ethoxy-3-oxopropyl)-, diethyl  
 ester (9CI) (CA INDEX NAME)



RN 217654-02-9 CAPLUS  
 CN 3-Oxa-7,10,13-triazahexadecan-16-oic acid, 7,10,13-tris(3-ethoxy-3-  
 oxopropyl)-4-oxo-, ethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR  
 THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L4 ANSWER 30 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

L4 ANSWER 31 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
AB The title products are prepared from polyalkylenepolyamines and/or polyamidoamines (optionally grafted with ethylenimine) and halogen-free crosslinking agents of specified composition. A polyamine (I) was prepared by polymerizing adipic acid with diethylenetriamine and grafting this polyamidopolyamine with 7.7 mol ethylenimine/basic N atom. Heating 146 g 80% aqueous I with 29 g ethylene carbonate at 110° for 3 h gave a product with viscosity 800 mPa·s. Use of this product as a dewatering, retention, and fixing aid in papermaking is exemplified.

ACCESSION NUMBER: 1997:638399 CAPLUS  
DOCUMENT NUMBER: 127:248553  
TITLE: Preparation and use of water-soluble condensation products of amines with halogen-free crosslinking agents in papermaking  
INVENTOR(S): Dyllick-Brenzinger, Rainer; Steuerle, Ulrich; Reuther, Wolfgang; Scherr, Guenter; Meixner, Hubert  
PATENT ASSIGNEE(S): BASF A.-G., Germany  
SOURCE: Ger. Offen., 14 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19607641	A1	19970904	DE 1996-19607641	19960229

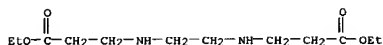
PRIORITY APPLN. INFO.: DE 1996-19607641 19960229

IT 195456-68-9, Adipic acid-diethyl 3,3'-(ethylenediimino)propionate-diethylenetriamine-ethylenimine graft copolymer 195456-69-0  
RI: TEM (Technical or engineered material use); USES (Uses)  
(preparation and use of water-soluble condensation products of amines

with halogen-free crosslinking agents in papermaking)

RN 195456-68-9 CAPLUS  
CN β-Alanine, N,N'-1,2-ethanediyibis-, diethyl ester, polymer with N-(2-aminoethyl)-1,2-ethanediamine, aziridine and hexanedioic acid, graft (9CI) (CA INDEX NAME)

CM 1  
CRN 19294-22-5  
CMF C12 H24 N2 O4



CM 2  
CRN 151-56-4  
CMF C2 H5 N

L4 ANSWER 32 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Title (carboxyalkyl)alkylenedi- and triamines  
R402C(CHR)mN[(CHR)pK](CHR)CH2R2(CHR3)nN(CH2AR)(CHR)mCO2R4 [n = 0-2, m, p = 1-3, R-R4 = H, alkyl, R1R2 or R2R3 may form a 5- or 6-membered ring, X = CO2R4, N(CH2AR), or Ar, which is C6H2R5R6R7-3,4,5 (R5, R6, R7 = H, alkyl, OH, alkoxy, amino)] were prepared for use as cosmetics and pharmaceuticals  
(compos. given). Thus, N,N'-bis(3,4,5-trimethoxybenzyl)-2-methylethylenediaminediacetic acid was prepared by condensation of 3,4,5-trimethoxybenzaldehyde with 1,2-propanediamine, followed by borohydride reduction of the product diimine and alkylation of the diamine with bromoacetic acid.

ACCESSION NUMBER: 1997:195642 CAPLUS  
DOCUMENT NUMBER: 126:186371  
TITLE: N,N'-bis(aralkyl)- or N-(aralkyl)-N'-(carboxyalkyl)-N,N'-bis(carboxyalkyl)alkylenedi- or triamine derivatives and their use in pharmacy and cosmetics  
INVENTOR(S): Galey, Jean-Baptiste; Genard, Sylvie  
PATENT ASSIGNEE(S): L'Oreal S. A., Fr.  
SOURCE: Eur. Pat. Appl., 18 pp.  
DOCUMENT TYPE: Patent  
LANGUAGE: French  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 755917	A1	19970129	EP 1996-401663	19960725
EP 755917	B1	19980408		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
FR 2737204	A1	19970131	FR 1995-9119	19950726
FR 2737204	B1	19970912		
US 5929112	A	19990727	US 1996-681438	19960723
CA 2182112	AA	19970127	CA 1996-2182112	19960725
AT 164830	E	19980415	AT 1996-401663	19960725
ES 2114341	T3	19980516	ES 1996-401663	19960725
JP 09132556	A2	19970520	JP 1996-214122	19960726

PRIORITY APPLN. INFO.: FR 1995-9119 19950726

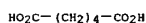
OTHER SOURCE(S): MARPAT 126:186371  
IT 187595-33-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of bis(aralkyl)- or (aralkyl)(carboxyalkyl)bis(carboxyalkyl)alkylenedi- or triamine derivs. for use in pharmacy and cosmetics)

RN 187595-33-1 CAPLUS  
CN β-Alanine, N,N'-(1-methyl-1,2-ethanediyil)bis[N-[(3,4,5-trimethoxyphenyl)methyl]-, diethyl ester (9CI) (CA INDEX NAME)

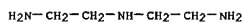
L4 ANSWER 31 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



CM 3  
CRN 124-04-9  
CMF C6 H10 O4

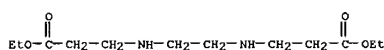


CM 4  
CRN 111-40-0  
CMF C4 H13 N3



RN 195456-69-0 CAPLUS  
CN β-Alanine, N,N'-1,2-ethanediyibis-, diethyl ester, polymer with aziridine (9CI) (CA INDEX NAME)

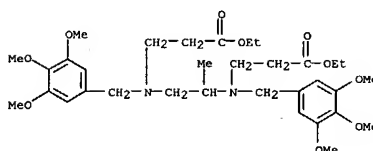
CM 1  
CRN 19294-22-5  
CMF C12 H24 N2 O4



CM 2  
CRN 151-56-4  
CMF C2 H5 N



L4 ANSWER 32 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L4 ANSWER 33 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB The polylactone is excellent in color hue, and can be employed in fields such as coatings, inks, UV-curable or electron beam-curable resins, etc., in which the color hue becomes a serious problem. It is prepared by Michael addition of a (meth)acrylate group-terminated lactone-derived polyester with an amine or polyamine. Thus, a mixture of 2-hydroxyethyl acrylate 232, ε-caprolactone 684, SnCl<sub>2</sub> 0.009, and methylhydroquinone 1 part was polymerized at 100°, and the product was cooled to 50° and treated with 86 parts piperazine to give a product with OH value 112 mg KOH/g and AHA value 80.

ACCESSION NUMBER: 1996:462241 CAPLUS  
 DOCUMENT NUMBER: 125:143633  
 TITLE: A polylactone having amino groups, its preparation, and coating and printing ink compositions containing it  
 INVENTOR(S): Matsui, Hideki  
 PATENT ASSIGNEE(S): Daicel Chemical Industries, Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 21 pp.  
 CODEN: EFXKXW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 713894	A2	19960529	EP 1995-402635	19951122
EP 713894	A3	19960731		
EP 713894	B1	20030502		
R: DE, ES, GB				
JP 08143651	A2	19960604	JP 1994-311302	19941122
JP 3419927	B2	20030623		
JP 08143813	A2	19960604	JP 1994-311303	19941122
JP 3534859	B2	20040607		
US 6194539	B1	20010227	US 1995-560110	19951117
ES 2197911	T3	20040116	ES 1995-402635	19951122
PRIORITY APPLN. INFO.:				
			JP 1994-311302	A 19941122
			JP 1994-311303	A 19941122

IT 179167-59-OP  
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
 (preparation of amino group-containing polylactones and coatings and inks containing them as pigment dispersants)

RN 179167-59-0 CAPLUS  
 CN Poly[oxy(1-oxo-1,6-hexanediyl)], α,α'-(7,10-dimethyl-4,13-dioxo-3,14-dioxo-7,10-diazahexadecane-1,16-diyl)bis[ω-hydroxy- (9CI) (CA INDEX NAME)]

L4 ANSWER 34 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB A range of substituted α-diazoamides and diazoimides was prepared from the corresponding amines or amides. Rhodium(II) catalyzed decomposition of the diazoamides resulted in attack on the aromatic ring to give oxindoles or attack on the alkyl group to give either β-lactams or cycloheptapyrrolones. The chemoselectivity of the rhodium carbenoid intermediate was dependent on the metal ligands, fluorinated carboxamides strongly promoting attack on aromatic rings in preference to other processes.

Decomposition of the diazoimides resulted in intramol. attack on the carbonyl group to give an ylide which could be trapped inter- or intramolecularly. X-ray crystal structures are reported for the diazo compds.  
 EtO<sub>2</sub>CN<sub>2</sub>CN<sub>2</sub>CNPhCH<sub>2</sub>CH<sub>2</sub>NPhCO<sub>2</sub>CN<sub>2</sub>CO<sub>2</sub>Et, 3-MeOC<sub>6</sub>H<sub>4</sub>N(CH<sub>2</sub>Ph)CO<sub>2</sub>CN<sub>2</sub>CO<sub>2</sub>Et, the indoles

I and II, the β-lactam III, the cycloheptapyrrolones IV and V, the dimer VI and the Pictet Spengler product VII.

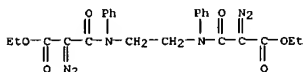
ACCESSION NUMBER: 1996:102079 CAPLUS  
 DOCUMENT NUMBER: 124:288376  
 TITLE: Ligand effects in the rhodium(II) catalyzed reactions of diazoamides and diazoimides  
 AUTHOR(S): Miah, Soyfur; Slawin, Alexandra M. Z.; Moody, Christopher J.; Sheehan, Scott M.; Marino, Joseph P., Jr.; Semones, Mark A.; Padwa, Albert; Richards, Ian

C.  
 CORPORATE SOURCE: Dep. Chem., Loughborough Univ., Loughborough, Leicestershire, LE11 3TU, UK  
 SOURCE: Tetrahedron (1996), 52(7), 2489-514  
 CODEN: TETRA; ISSN: 0040-4020  
 PUBLISHER: Elsevier  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 124:288376

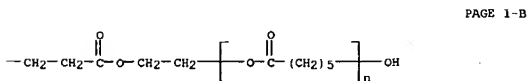
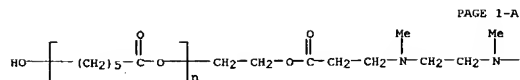
IT 175687-73-7P  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);

RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)  
 (crystallog.; ligand effects in rhodium(III) catalyzed reactions of diazoamides and diazoimides)

RN 175687-73-7 CAPLUS  
 CN Propanoic acid, 3,3'-[1,2-ethanediylbis(phenylimino)]bis[2-diazo-3-oxo-, diethyl ester (9CI) (CA INDEX NAME)]



L4 ANSWER 33 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L4 ANSWER 34 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

L4 ANSWER 35 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB Radiopharmaceuticals consisting essentially of a lipophilic, charge neutral radionuclide complex of a diaminedithiol ligand having 1-4 ester groups of the -A-COOR (A = C1-10 alkylene, R = C1-10 alkyl) are prepared for radioimaging brain perfusion in primates. Technetium-99m is a preferred radionuclide. Thus N,N'-1,2-ethylenediybis-L-cysteine (I) (preparation is given) in EtOH was refluxed with HCl gas for 2.5 h, then slurry was cooled, filtered and purified to obtain I.2Et ester 2HCl (II). II and SnCl2 and 99mTcO4 were mixed to obtain 99mTc diaminedithiol complex of the invention. Different 99mTc diaminedithiol complexes were used for evaluation of regional cerebral blood flow by performing brain imaging studies in monkeys.

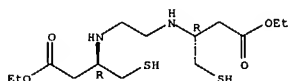
ACCESSION NUMBER: 1994:264828 CAPLUS  
 DOCUMENT NUMBER: 120:264828  
 TITLE: Ester-substituted diaminedithiols and radiolabeled complexes thereof for radio-imaging brain  
 INVENTOR(S): Bergstein, Paul L.; Cheesman, Edward H.; Watson, Alan D.  
 PATENT ASSIGNEE(S): Du Pont Merck Pharmaceutical Co., USA  
 SOURCE: U.S., 13 pp. Cont.-in-part of U.S. Ser. No. 16,982, abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5279811	A	19940118	US 1988-143561	19880126
AU 8811748	A1	19880901	AU 1988-11748	19880216
AU 614276	B2	19910829		
DK 8808016	A	19880819	DK 1988-816	19880217
DK 175089	B1	20040524		
EP 279417	A2	19880824	EP 1988-102252	19880217
EP 279417	A3	19890726		
EP 279417	B1	19920520		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AT 76401	E	19920615	AT 1988-102252	19880217
ES 2042609	T3	19931216	ES 1988-102252	19880217
JP 63295549	A2	19881201	JP 1988-34137	19880218
ZA 8801136	A	19891025	ZA 1988-1136	19880218
CA 1271195	A1	19900703	CA 1988-559230	19880218
US 5431900	A	19950711	US 1993-139894	19931020
PRIORITY APPLN. INFO.:			US 1987-16982	B2 19870218
			US 1988-143561	A 19880126
			EP 1988-102252	A 19880217

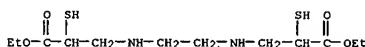
OTHER SOURCE(S): MARPAT 120:264828  
 IT 154147-85-ODP, complexes with radioisotopes 154147-90-7DP  
 , complexes with radioisotopes  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of, for radioimaging brain)  
 RN 154147-85-0 CAPLUS

L4 ANSWER 35 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)  
 CN Butanoic acid, 3,3'-(1,2-ethanediyldiimino)bis[4-mercapto-, diethyl ester, (3R,3'R)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 154147-90-7 CAPLUS  
 CN Propanoic acid, 3,3'-(1,2-ethanediyldiimino)bis[2-mercapto-, diethyl ester, (9CI) (CA INDEX NAME)



L4 ANSWER 36 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB The title compds. comprise a mixture of straight and branched perfluoroalkyl groups bonded to Cl, Br, or I through a F-free alkylene group. Perfluorodecyltetrahydroiodide (prepared from perfluorosulfonyl fluoride, 40% straight and 60% branched, treated first with I, then with C2H4) was derivatized to thiol functionality by treatment with thiourea in EtOH to give perfluorodecyltetrahydrothiol (I). I was added to a reaction mixture containing hexamethoxymethylmelamine to give a I-melamine condensate (II, 1:4 mol ratio). A 50/50 polyester/cotton fabric blend was treated with an emulsion of II at 0.3%, dried and cured at 150°, to give a fabric with oil resistance (AATCC 118-1975) 5 and 5 after 1 dry cleaning, vs. 3 and 2, resp., for a precursor perfluorodecyltetrahydroiodide having all straight chain perfluoroalkyl groups.

ACCESSION NUMBER: 1994:136059 CAPLUS  
 DOCUMENT NUMBER: 120:136059  
 TITLE: Perfluoroalkyl halides and derivatives as precursors for oil and water repellants and surfactants  
 INVENTOR(S): Behr, Frederick E.; Dams, Rudolf J.; DeWitte, Johan E.; Hagen, Donald F.  
 PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co., USA  
 SOURCE: Can. Pat. Appl., 67 pp.  
 CODEN: CPXXEB  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

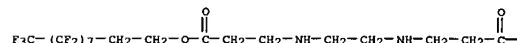
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2071596	AA	19930111	CA 1992-2071596	19920618
EP 526976	A1	19930210	EP 1992-305710	19920622
EP 526976	B1	19970115		
R: BE, CH, DE, FR, GB, IT, LI, NL				
JP 05345732	A2	19931227	JP 1992-183345	19920710
JP 3231844	B2	20011126		
JP 2002138078	A2	20020514	JP 2001-204928	19920710
PRIORITY APPLN. INFO.:			US 1991-728184	A 19910710
			JP 1992-183345	A3 19920710

OTHER SOURCE(S): MARPAT 120:136059  
 IT 150953-94-9P  
 RL: PREP (Preparation)  
 (linear and branched, preparation of, for surfactants)  
 RN 150953-94-9 CAPLUS  
 CN 3,14-Dioxo-7,10-diazatetracontan-1-aminium, N-ethyl-17,17,18,18,19,20,20,21,21,22,22,23,23,24,24,24-heptafluoro-N,N-dimethyl-4,13-dioxo-, ethyl sulfate (9CI) (CA INDEX NAME)

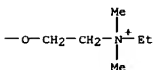
CM 1  
 CRN 150953-93-8  
 CMF C24 H33 F17 N3 O4

L4 ANSWER 36 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)

PAGE 1-A



PAGE 1-B

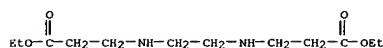


CM 2  
 CRN 48028-76-8  
 CMF C2 H5 O4 S

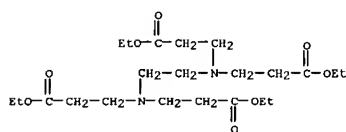




ACCESSION NUMBER: 1993:212736 CAPLUS  
 DOCUMENT NUMBER: 118:212736  
 TITLE: Preparation of spermic acid and related compounds  
 AUTHOR(S): Ioannou, Panayiotis V.  
 CORPORATE SOURCE: Dep. Chem., Univ. Patras, Patras, Greece  
 SOURCE: Chimika Chronika (1991), 20(3-4), 85-95  
 CODEN: CMCRCZ; ISSN: 0366-693X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 118:212736  
 IT 147416-88-4P 147416-90-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (Preparation and ester hydrolysis of)  
 RN 147416-88-4 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediyibis-, diethyl ester, dihydrochloride  
 (9CI). (CA INDEX NAME)

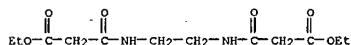
 $\bullet_2 \text{HCl}$ 

RN 147416-90-8 CAPLUS  
CN  $\beta$ -Alanine, N,N'-1,2-ethanedilylbis[N-(3-ethoxy-3-oxopropyl)-, diethyl ester, dihydrochloride (9CI) (CA INDEX NAME)

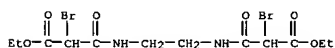


● 2 HCl

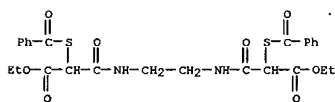
L4 ANSWER 38 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
RN 13001-79-1 CAPLUS  
CN Propanoic acid, 3,3'-(1,2-ethanediylidimino)bis[3-oxo-, diethyl ester  
(9CI) (CA INDEX NAME)



IT 146725-69-1P, Diethyl 2,9-dibromo-3,8-dioxo-4,7-diazadecanedioate  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and reaction of, with sodium thiobenzoate)  
RN 146725-69-1 CAPLUS  
CN Propanoic acid, 3,3'-(1,2-ethanediyldiimino)bis(2-bromo-3-oxo-, diethyl  
ester (9CI) (CA INDEX NAME)



IT 146725-70-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and reaction of, with technetate ethanediolato oxo  
 complex)  
 RN 146725-70-4 CAPLUS  
 CN Propanoic acid, 3,3'-(1,2-ethanedioldiylidino)bis[2-(benzoylthio)-3-oxo-  
 diethyl ester (9CI) (CA INDEX NAME)



L4 ANSWER 38 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN  
AR Diamide dimercaptide (N2S2) ligands  
PhC(O)SCH(R)CONHCH2CH2NHCOCH2(R)CHSC(O)  
Ph (4, 8, R = CH2COOMe, COOEt, resp.) and  
PhC(O)SCH(COOMe)CH2CONHCH2CH2NH  
COCH2SCH(COOMe)SCH(O)Ph (5) were synthesized and evaluated as potential  
radioradiopharmaceuticals. The target compounds were prepared in modest  
overall yields of 22%, 20%, and 19%, for 4, 8, and 5 resp., using  
readily

readily available starting materials. Following in situ deprotection, 99mTc complexes of high radiochem. purity were obtained and are stable for 56 h. AsPh<sub>3</sub> (99mTcL<sub>3</sub>) [1, H<sub>2</sub>L] = H<sub>2</sub>SC(=O)Et<sub>2</sub>CN(CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NHCOCH<sub>2</sub>C(=O)Et)<sub>2</sub>SH] was isolated. X-ray crystallog. data for 1 (monoclinic, space group P2<sub>1</sub>/n, Z = 4, R = 0.0645 and Rw = 0.0663) show that the Tc is bound to both thiolate S atoms and to 2 deprotonated amidate N atoms. The coordination geometry about the Tc is square-pyramidal with an oxo ligand in the apical position. The Tc-N bond distances (2.002(12) and 1.984(12) Å), the Tc-S bond distances (2.300(5) and 2.286(5) Å), and the Tc-O bond distance (1.667(11) Å) are in good agreement with bond lengths reported for similar complexes. The carboxylate groups are not bonded to the Tc atom in the solid state, nor in CDCl<sub>3</sub> solution, as evidenced

by x-ray crystal data and solution NMR data, resp. In the solid state, monoanionic, therefore, at physiol. pH,  $[99mTcO(L\delta)]$  is presumably trianionic. Biodistribution studies performed in rats with the  $99mTc$  complexes revealed slow blood clearance and high muscle uptake for these agents. Modest hepatobiliary excretion was observed, and low quantities of the complexes were found in the heart, lungs, and spleen after 1 h. The urinary excretion of the  $99mTc$  complexes of ligands 4, 5, and 8 is slow when compared to the excretion of  $[^{131}I]OIH$  in rats (22%, 22%, and 32% vs. 85-86%, resp.). Protein binding of  $99mTc$  complexes of ligands 4, 5, and 8 in both rat and monkey plasma is similar to MAG3. Preliminary planar imaging studies in monkeys revealed slow renal excretion for these agents.

agents.  
The evaluated 99mTc complexes are poor candidates as renal radiopharmaceuticals.

ACCESSION NUMBER: 1993:204047 CAPLUS  
DOCUMENT NUMBER: 118:204047  
TITLE: Dicarboxylate diamide dimericaptate (N2S2) technetium-99m complexes: synthesis and biological evaluation as potential renal radiopharmaceuticals  
AUTHOR(S): Canney, Daniel J.; Billings, Jeffrey; Francesconi, Lynn C.; Guo, Yu Zhi; Haggerty, Brian S.; Rheingold, Arnold L.; Kung, Hank F.  
CORPORATE SOURCE: Dep. Radiol., Univ. Pennsylvania, Philadelphia, PA, 19104, USA  
SOURCE: Journal of Medicinal Chemistry (1993), 36(8), 1032-40  
CODEN: JMCMAR; ISSN: 0022-2623  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 13001-79-1P, Diethyl 3,6-dioxo-4,7-diazadecanedioate  
RL: RCT (Reactant); SYN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and bromination of, with bromosuccinimide and hydrobromic acid)

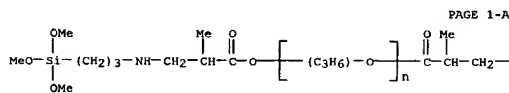
L4 ANSWER 39 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
AB The title compns. useful as building sealants contain (A) polymers having  
OH or hydrolyzable groups on both ends and comprising main chain  
-NH[CH2CH2C(=O)R1]nCOCH2CH2NH2NH2]mCH2CH2C(=O)R2]nO2CCH2CH2NH- [R1 =  
C2-4 hydrocarbylene; R2 = H, Me; Z = C1-20 (un)saturated

hydrocarbylene,  
C1-20 divalent group containing ether, ester or NH group, -  
R5#4R3S10(R3#4S10)1S1R3R4R5,- R3, R4 = C1-6 (un)substituted hydrocarbyl;  
R5 = C1-6 hydrocarbylene optionally containing NH group; 1 = 0-50; m =  
1-5; n  
= 20-200] and end groups X#YSi#R#63-(a+b) [R6 = (un)substituted  
hydrocarbyl; R7 = C1-15 divalent group optionally containing NH group; X  
= OH;  
Y = hydrolyzable group; a, b = 0-3; (a + b) = 1-3], (B) 1-20 parts  
organosilane R84-CSiQc [R8 = C1-8 (un)substituted hydrocarbyl; Q =  
hydrolyzable group; c = 4, 4) or hydrolyzate, and (C) 0-5 parts curing  
catalyst. A sealant composition.  
(MeO)3Si(C3H6NHCH2CHMeO)2(C2H5CHMeO)8OCOSiCHMeC  
CH2CH2CH2CH2CHMeO)2(C2H5CHMeO)8OCOSiCHMeCH2NHC3H6Si(OMe)3 80, DOP 20, and  
CaCO3 100, MeSi(OMe)2 5, dibutyltin dilaurate 2, γ  
quacidyldiethyltrimethoxysilane 1, and aminopropyltrimethoxysilane 1 part.

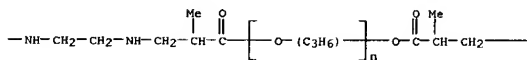
ACCESSION NUMBER: 1993:83015 CAPLUS  
DOCUMENT NUMBER: 118:83015  
TITLE: Silicone compositions curable at room temperature by moisture and cured products  
INVENTOR(S): Inoue, Yoshio  
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04170432	A2	19920618	JP 1990-298045	19901102
JP 2529022	B2	19960828		
PRIORITY APPLN. INFO.:			JP 1990-298045	19901102

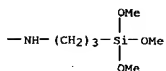
IT 145898-59-5P 145927-13-5P  
 RL: PREP (Preparation)  
 (manufacture of, for sealants curable at room temperature by moisture)  
 RN 145898-59-5 CARPUX  
 CN Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha,\alpha'$ -[1,2-ethanediylbis[imino(2-methyl-1-oxo-3,1-propanediyl)]]bis[ $\alpha$ -(2-methyl-1-oxo-3-[[3-(trimethoxysilyl)propyl]amino]propoxy]- (SCI) (CA INDEX NAME)



PAGE 1-B



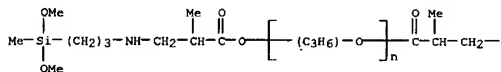
PAGE 1-C



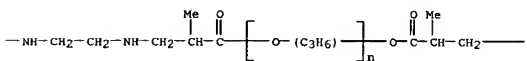
RN 145927-13-5 CAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha,\alpha'$ -[1,2-ethanediylbis(imino(2-methyl-1-oxo-3,1-propanediyl))]bis[ $\omega$ -[3-[(dimethoxymethylsilyl)propyl]amino]-2-methyl-1-oxopropoxy]- (9CI) (CA INDEX NAME)

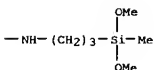
PAGE 1-A



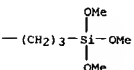
PAGE 1-B



PAGE 1-C



PAGE 1-C



AB The title compns. comprise (A) polymers having terminated OH groups or hydrolyzable groups 100, (B) organosilanes or their partial hydrolyzates 1-20, and (C) curing catalysts 0-5 parts. Refluxing 447 g polyoxypropylene allyl ether methacrylate in 300 g PhMe for 1 h, heating with 3.0 g H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub> at 100° for 3 h then with 19.6 g HSCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>Si(OMe)<sub>3</sub> and N,N-bis(isobutyronitrile) at 100-110° for 3 h gave a polymer with viscosity 12,000 cS and both ends capped with Si(OMe)<sub>3</sub> groups.

Roll mixing the polymer 800, dioctyl phthalate 200, and CaCO<sub>3</sub> 1000 g, kneading (200 g) with MeSi(OMe)<sub>3</sub> 5, Bu<sub>2</sub>Sn dilaurate 1,  $\gamma$ -aminopropyltriethoxysilane 1, and  $\alpha$ -guanidylpropyltrimethoxysilane 1 g, forming into a 2-mm sheet, and curing 7 days at 20° and 60% relative humidity resulted in test piece with elongation 500%, 50% modulus 3.0 kg/cm<sup>2</sup>, and JIS-A hardness 25.

ACCESSION NUMBER: 1992:613759 CAPLUS

DOCUMENT NUMBER: 117:213759

TITLE: Room-temperature-curable resin compositions for construction sealing materials

INVENTOR(S): Inoue, Yoshio

PATENT ASSIGNEE(S): Shin-Etsu Kagaku Kogyo K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKKXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04089860	A2	19920324	JP 1990-205382	19900802
JP 2553233	B2	19961113		
PRIORITY APPLN. INFO.:			JP 1990-205382	19900802

IT 144233-53-4

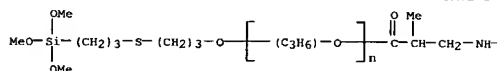
RL: USES (Uses)

(room-temperature-curable compns., for construction sealing materials)

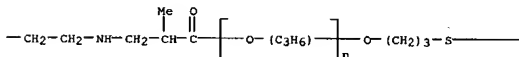
RN 144233-53-4 CAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha,\alpha'$ -[1,2-ethanediylbis(imino(2-methyl-1-oxo-3,1-propanediyl))]bis[ $\omega$ -[3-[(trimethoxysilyl)propyl]thio]propoxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



AB The title compound H<sub>2</sub>CCH<sub>2</sub>CH(CO<sub>2</sub>H)NHCOCH<sub>2</sub>NHC(CO<sub>2</sub>H)CH<sub>2</sub>CO<sub>2</sub>H (I) and its salts

are useful as chelating and sequestering agents in detergents and bleaching compns. I is prepared by the reaction of H<sub>2</sub>CCH<sub>2</sub>CH(CO<sub>2</sub>H)NHCOCH<sub>2</sub>NH<sub>2</sub> with Me H maleate in water at alkaline pH followed

by hydrolysis of ester groups or by the reaction of aspartic acid with a glyoxal derivative such as glyoxal sulfite.

ACCESSION NUMBER: 1991:209605 CAPLUS

DOCUMENT NUMBER: 114:209605

TITLE: N,N'-(1-Oxo-1,2-ethanediyl)bis(aspartic acid), salts, and use in detergent compositions

INVENTOR(S): Glogowski, Mark W.; Hartman, Frederick A.; Heinzman, Stephen W.; Perkins, Christopher M.

PATENT ASSIGNEE(S): Procter and Gamble Co., USA

SOURCE: U.S., 18 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4983315	A	19910108	US 1989-392168	19890810
EP 412697	A2	19910213	EP 1990-308312	19900730
EP 412697	A3	19911030		
EP 412697	B1	19951018		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
ES 2078313	T3	19951216	ES 1990-308312	19900730
CA 2022874	AA	19910211	CA 1990-2022874	19900808
CA 2022874	C	19970204		
AU 9060869	A1	19910214	AU 1990-60869	19900809
AU 648260	B2	19940421		
CN 1051171	A	19910508	CN 1990-107779	19900810
CN 1030193	B	19951101		
JP 03173857	A2	19910729	JP 1990-213604	19900810
JP 2749436	B2	19980513		
BR 9003950	A	19910903	BR 1990-3950	19900810
IN 177747	A	19970215	IN 1990-DE833	19900820
CN 1101072	A	19950405	CN 1994-105137	19940520
PRIORITY APPLN. INFO.:			US 1989-392168	A 19890810

OTHER SOURCE(S): MARPAT 114:209605

IT 133677-58-4P

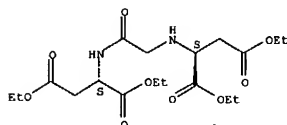
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and hydrolysis of)

RN 133677-58-4 CAPLUS

CN L-Aspartic acid, N-[N-(3-ethoxy-1-(ethoxycarbonyl)-3-oxopropyl]glycyl]-, diethyl ester, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 42 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STN<sup>1</sup>  
AB The title polymers, with low viscosity and glass temperature (Tg) and  
useful as  
energetic binders for propellants and explosives (no data), are prepared  
from nitramine derivatives and nitroxy acids. A 1:1  
HO2CCH2CH2N(O2)C(CH3)CH2N(NO2)CH2CH2CO2H-diethylene glycol copolymer had  
weight-average mol. weight 1907, Tg 0.75°, and decomposition temperature  
243.2°.

243.2".

ACCESSION NUMBER:	1990:479248	CAPLUS
DOCUMENT NUMBER:	113:79248	
TITLE:	Preparation of polymers containing nitramine groups	
INVENTOR(S):	Day, Roger W.; Hani, Rahim	
PATENT ASSIGNEE(S):	Olin Corp., USA	
SOURCE:	U.S.. 6 pp.	

SOURCE: U.S., 6 pp.  
CODEN: USXXAM

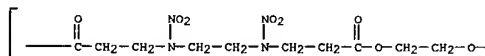
DOCUMENT TYPE: Patent  
LANGUAGE: English

LANGUAGE: E  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

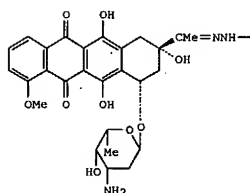
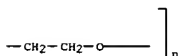
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4916206	A	19900410	US 1988-270977	19881114
US 5008443	A	19910416	US 1989-411380	19890925
WO 9108245	A	19910613	WO 1989-US5325	19891127
WE: AU, BB, BG, BR, DK, FI, HU, JP, KR, LK, MC, MG, MW, NO, RO, SD, SU				
AW: AT, BE, BF, BJ, CF, CG, CH, CM, DE, ES, FR, GA, GB, IT, LU, ML, MR, NL, SE, SN, TD, TG				
AU 9052645	A1	19910626	AU 1990-52645	19891127
BR 8907908	A	19920721	BR 1989-7908	19891127
EP 501956	A1	19920909	EP 1990-904711	19891127
CA 2004286	FR, GB, IT			
CA 2004286	CA	19910531	CA 1989-2004286	19891130
PRIORITY APPLN. INFO.:			US 1988-270977	19881114
			WO 1989-US5325	19891127

IT 114411-42-6P  
RL: PREP (Preparation)  
(preparation of, as binders for explosives and propellants)  
114411-42-6 CAPLUS  
RN Poly[oxy-1,2-ethanedioxyloxy-1,2-ethanedioxyloxy(1-oxo-1,3-  
CN propanediyl)](nitroimino)-1,2-ethanedioyl(nitroimino)(3-oxo-1,3-  
propanediyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

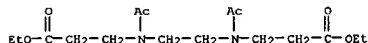


AB A series of bisanthracylene hydrazones were prepared,  
QCO(CH<sub>2</sub>)m[NR(CH<sub>2</sub>)n]KNR(CH<sub>2</sub>)mCOO (I, R = H) (k = 1 or 2; m = 1 or 2, n =  
2-6 for all compds.) containing either 2 or 3 secondary amines in the linker  
chain as well as the corresponding acetyl (I, R = Ac), or benzoyl (I, R = Bz)  
protected derivs. (I, R = H) could not be isolated in pure form as they  
= n decomposed during semipreparative HPLC. I (R = Ac) and I (R = Bz, k = m  
= 2) were characterized by fast atom bombardment mass spectrometry. All  
compds. bis-intercalated into DNA as judged by viscometric lengthening of  
DNA and by decreased dissociation kinetics from DNA under conditions of  
SDS sequestration. I (R = H) exhibited dissociation rates less than 10-5  
that of daunomycin. The apparent affinity of these compds. was so great that the  
dissociation consts. could not be quantitated, and they were only  
relayed from DNA to monomeric species by a slow hydrolysis process of the hydrazone  
linkers. Protection of those derivs. containing 2 amines in the linker by  
acetyl and benzoyl groups, decreased the dissociation time constant to  
490-2900 s (1400-8000 fold slower than daunomycin) with maximal DNA residence time  
corresponding to a linker length of 14 atoms (approx. 14 Å). Addition of  
a third protected amine in the linker, I (R = Ac, k = m = n = 2),  
enhanced the DNA residence time a further 3-fold. In vitro inhibition of  
transcription anal. showed that all of the bis-anthracylenes exhibited a  
DNA sequence specificity for 5'-CPA-3' sites, with adjacent intercalation  
sites decreasing in the order CA > CA, TC > CT > GC, CG, CC, TA, and it

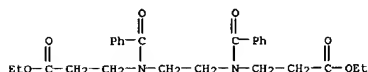
apparent that the presence of the basic amino functions in the bridging chain provides for greatly enhanced formation of the drug-DNA complex.

ACCESSION NUMBER: 1990:91218 CAPLUS  
DOCUMENT NUMBER: 112:91218  
TITLE: Synthesis of polyamine-linked bis-daunomycin hydrazones and their interaction with DNA

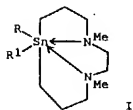
L4 ANSWER 43 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 AUTHOR(S): Hook, R. J.; Phillips, D. R.; Reiss, J. A.  
 CORPORATE SOURCE: Dep. Chem., La Trobe Univ., Bundoora, 3083, Australia  
 SOURCE: Anti-Cancer Drug Design (1989), 4(3), 173-90  
 CODEN: ACDEA; ISSN: 0266-9536  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 125459-57-6P 125459-63-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and hydrazinolysis of)  
 RN 125459-57-6 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediylbis[N-acetyl-, diethyl ester (9CI) (CA INDEX NAME)



RN 125459-63-4 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediylbis[N-benzoyl-, diethyl ester (9CI) (CA INDEX NAME)

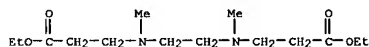


L4 ANSWER 44 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 GI



AB The reaction of the functional Grignard reagent  $(\text{CH}_2\text{N}(\text{Me})\text{CH}_2\text{CH}_2\text{CH}_2\text{MgCl})_2$ , prepared from N,N'-dimethyl-N,N'-bis(3-chloropropyl)ethylenediamine and Mg with  $\text{SnCl}_4$  followed by derivatization leads to new tin heterocycles of the general type  $\text{RR}_1\text{Sn}(\text{CH}_2\text{CH}_2\text{CH}_2\text{N}(\text{Me})\text{CH}_2)_2$  I (R = R1 = Cl, Br, iodo, OMe, SPh, Me, Ph; R = Me, R1 = Cl, Br, iodo). In I (R = R1 = Cl, Br, iodo, OMe, SPh) the tin atoms have octahedral configurations with the carbon atoms attached to tin trans to each other. The tetraorganotin compds. I (R = R1 = Me, Ph) show no transannular Sn-N interactions. The nonsym. substituted triorganotin compound I (R = Me, R1 = Cl, Br, iodo) exhibit ionic pentavalent structures. Their intramol. mobility can be interpreted in terms of a partial Berry process. For the purpose of comparison, compds. of the type  $(\text{CH}_2\text{N}(\text{Me})\text{CH}_2\text{CH}_2\text{CH}_2\text{SnMe}_2)_2$  (R = Me, Cl) have been prepared and studied analogously.

ACCESSION NUMBER: 1989:423612 CAPLUS  
 DOCUMENT NUMBER: 111:23612  
 TITLE: Synthesis and structure of new penta- and hexacoordinated organotin compounds  
 AUTHOR(S): Jurkschat, K.; Kalbitz, J.; Dargatz, M.; Kleinpeter, E.; Tzschach, A.  
 CORPORATE SOURCE: Sek. Chem., Martin-Luther-Univ. Halle-Wittenberg, Halle/Saale, DDR-4010, Ger. Dem. Rep.  
 SOURCE: Journal of Organometallic Chemistry (1988), 347(1-2), 41-57  
 CODEN: JORCAI; ISSN: 0022-328X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 OTHER SOURCE(S): CASREACT 111:23612  
 IT 42434-14-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and reduction of)  
 RN 42434-14-0 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediylbis[N-methyl-, diethyl ester (9CI) (CA INDEX NAME)



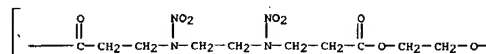
L4 ANSWER 44 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

L4 ANSWER 45 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB The title copolymer (I), having mol. weight 1500-2000, is prepared by polymerizing excess diethylene glycol with di-Me 4,7-dinitrazadecanedioate (prepared by Michael addition of ethylene dinitramine and Me acrylate) at approx. 95° in the presence of p-toluenesulfonic acid and purifying the product by passing it over silica gel with  $\text{CH}_2\text{Cl}_2$  as solvent. I is compatible with stabilized nitroglycerin for use as an energetic polymer binder for propellants.  
 ACCESSION NUMBER: 1988:205302 CAPLUS  
 DOCUMENT NUMBER: 108:205302  
 TITLE: Energetic copolymer of diethylene glycol and dimethyl 4,7-dinitrazadecanedioate for use in propellants  
 INVENTOR(S): Chi, Minn Shong  
 PATENT ASSIGNEE(S): United States Dept. of the Army, USA  
 SOURCE: Patent Statutory Invent. Regist., 3 pp.  
 CODEN: SRXKEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

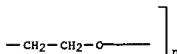
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 365	H1	19871103	US 1987-8511	19870129
CA 1320612	A1	19930720	CA 1987-553707	19871207
PRIORITY APPLN. INFO.:			US 1987-8511	19870129

IT 114411-42-6P  
 RL: PREP (Preparation)  
 (preparation of, as propellant binder)  
 RN 114411-42-6 CAPLUS  
 CN Poly[oxy-1,2-ethanediyl-oxy-1,2-ethanediyl-oxy(1-oxo-1,3-propanediyl)(nitroimino)-1,2-ethanediyl(nitroimino)(3-oxo-1,3-propanediyl)] (9CI) (CA INDEX NAME)

PAGE 1-A

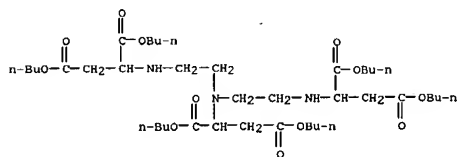


PAGE 1-B



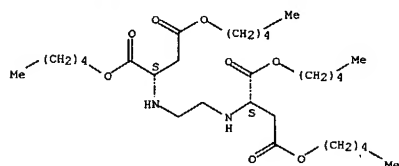
L4 ANSWER 46 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Maleic anhydride reacted with NaOH and then 2(NH2)2 [Z = (CH2)n,  
 HN(CH2CH2)2; n = 2, 3], HN(CH2CO2H)2 and H2NCHRCO2H (R = H, CH2CO2H) to  
 give the corresponding 2[NHCH(CO2H)CH2CO2H]2 [I; Z = (CH2)n,  
 HO2CCH2CH(CO2H)N(CH2CH2)2 (II); n = 2, 3], HO2CCH2CH(CO2H)N(CH2CO2H)2 and  
 HO2CCH2CH(CO2H)NCH2CH2CO2H (R = same), resp., after acidification. I (Z  
 = meso-CHMeCHMe) and II were prepared analogously using LiOH, and I (Z =  
 trans-1,2-cyclohexylene) was prepared using di-Bu maleate via  
 saponification of the  
 intermediate tetra-Bu ester. The pK values of these products are

tabulated.  
 ACCESSION NUMBER: 1979:438876 CAPLUS  
 DOCUMENT NUMBER: 91:38876  
 TITLE: Synthesis and complexing properties of complexons  
 derived from dicarboxylic acids. V. Synthesis of  
 complexons derived from succinic acid  
 AUTHOR(S): Gorelov, I. P.; Samsonov, A. P.; Nikol'skii, V. M.;  
 Babich, V. A.; Svetogorov, Yu. E.; Smirnova, T. I.;  
 Malakhov, E. D.; Kozlov, Yu. M.; Kapustnikov, A. I.  
 CORPORATE SOURCE: Kalinin. S-kh. Inst., Kalinin, USSR  
 SOURCE: Zhurnal Obshchei Khimii (1979), 49(3), 659-63  
 CODEN: ZOKHA4; ISSN: 0044-460X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 OTHER SOURCE(S): CASREACT 91:38876  
 IT 70650-47-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant of reagent)  
 (preparation and hydrolysis of)  
 RN 70650-47-4 CAPLUS  
 CN Aspartic acid, N,N-bis[2-([3-butoxy-1-(butoxycarbonyl)-3-  
 oxopropyl]amino)ethyl]-, dibutyl ester (9CI) (CA INDEX NAME)



L4 ANSWER 47 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 RN 69812-80-2 CAPLUS  
 CN L-Aspartic acid, N,N'-1,2-ethanedilylbis-, tetrapentyl ester,  
 dihydrochloride (9CI) (CA INDEX NAME)

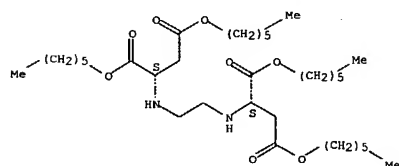
Absolute stereochemistry.



● 2 HCl

RN 69812-81-3 CAPLUS  
 CN L-Aspartic acid, N,N'-1,2-ethanedilylbis-, tetrahexyl ester,  
 dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● 2 HCl

RN 69812-82-4 CAPLUS  
 CN L-Aspartic acid, N,N'-1,2-ethanedilylbis-, tetraheptyl ester,  
 dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

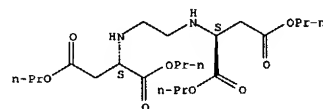
L4 ANSWER 47 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB The title diamines added to di-Cl-C7 and -C9 n-alkyl maleates to give the  
 corresponding alkylenebis[asparaginate] esters and, in the case of  
 H2NCH2CH2NH2, some (E)-RO2CCN:CHCONHCH2CH2NH2. HOCH2CH2NH2 gave  
 HOCH2CH2NHCH(CO2R)CH2CO2R; the kinetics were determined

ACCESSION NUMBER: 1979:168021 CAPLUS  
 DOCUMENT NUMBER: 90:168021  
 TITLE: Reaction of maleic acid diesters with ethylene- and  
 hexamethylenediamines, and monoethanolamine  
 AUTHOR(S): Tanchuk, Yu. V.; Kal'chuk, I. A.  
 CORPORATE SOURCE: Inst. Fiz.-Org. Khim. Uglekhim., Kiev, USSR  
 SOURCE: Zhurnal Organicheskoi Khimii (1978), 14(11), 2252-8  
 CODEN: ZORKAE; ISSN: 0514-7492

DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 69812-78-8P 69812-79-9P 69812-80-2P  
 69812-81-3P 69812-82-4P 69812-83-5P  
 69952-46-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)

RN 69812-78-8 CAPLUS  
 CN L-Aspartic acid, N,N'-1,2-ethanedilylbis-, tetrapropyl ester,  
 dihydrochloride (9CI) (CA INDEX NAME)

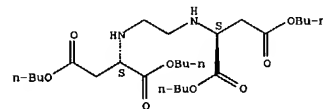
Absolute stereochemistry.



● 2 HCl

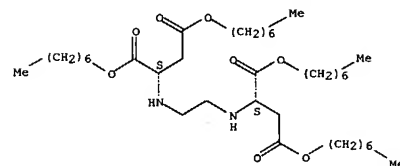
RN 69812-79-9 CAPLUS  
 CN L-Aspartic acid, N,N'-1,2-ethanedilylbis-, tetrabutyl ester,  
 dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● 2 HCl

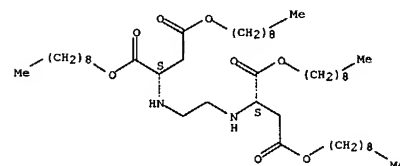
L4 ANSWER 47 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



● 2 HCl

RN 69812-83-5 CAPLUS  
 CN L-Aspartic acid, N,N'-1,2-ethanedilylbis-, tetraoctyl ester,  
 dihydrochloride (9CI) (CA INDEX NAME)

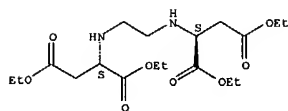
Absolute stereochemistry.



● 2 HCl

RN 69952-46-1 CAPLUS  
 CN L-Aspartic acid, N,N'-1,2-ethanedilylbis-, tetraethyl ester,  
 dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● 2 HCl

These compns. contain ≥1 amine addition product with an α,β-unsatd. carboxylic acid derivative or an α,β-unsatd. ketone or a mixture thereof, a binder, and a pigment. Thus, a typical desensitizing composition, which could be readily printed on a receptor sheet, contained

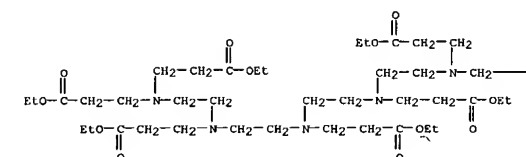
(MeO<sub>2</sub>CCH<sub>2</sub>CH<sub>2</sub>)<sub>2</sub>N(CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me)<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>N(CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me)<sub>2</sub> 60, a resin-modified maleic acid resin (Malckeed 33) 30, TiO<sub>2</sub> 10, and polyethylene glycol (average mol. weight 400) 2 parts.

ACCESSION NUMBER: 1977:544122 CAPLUS  
DOCUMENT NUMBER: 87:144122  
TITLE: Desensitizing compositions for copying paper  
INVENTOR(S): Kamio, Takayoshi; Miyamoto, Akio  
PATENT ASSIGNEE(S): Fujii Photo Film Co., Ltd., Japan  
SOURCE: Ger. Offen., 37 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

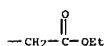
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2630582	A1	19770120	DE 1976-2630582	19760707
DE 2630582	B2	19810730		
DE 2630582	C3	19820429		
JP 52008312	A2	19770122	JP 1975-83305	19750707
JP 55050796	B4	19801219		
GB 1547796	A	19790627	GB 1976-28130	19760706
US 4125636	A	19781114	US 1976-703147	19760707
			JP 1975-83305	19750707

IT 64205-96-5 64205-97-6 64205-98-7  
64206-00-4 64206-01-5 64206-02-6  
64206-03-7 64206-04-8 64206-05-9  
RL: USES (Uses)  
(desensitizing compns. containing, for pressure-sensitive copying paper)  
RN 64205-96-5 CAPLUS  
CN 4,7,10,13,16-Pentaazanonadecanedioic acid,  
4,7,10,13,16-pentakis(3-ethoxy-3-oxopropyl)-, diethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

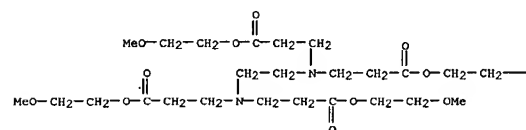


PAGE 1-B



RN 64205-97-6 CAPLUS  
CN β-Alanine, N,N'-1,2-ethanediylbis[N-(3-(2-methoxyethoxy)-3-oxopropyl)-bis(2-methoxyethyl) ester (9CI) (CA INDEX NAME)

PAGE 1-A

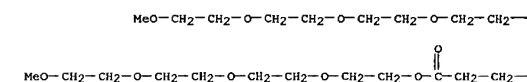


PAGE 1-B

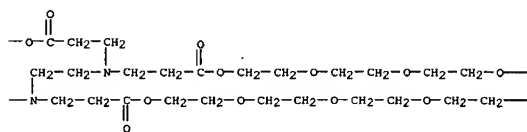


RN 64205-98-7 CAPLUS  
CN β-Alanine, N,N'-1,2-ethanediylbis[N-(3-oxo-4,7,10,13,16-pentaazaoheptadec-1-yl)-, bis(3,6,9,12-tetraoxatridec-1-yl) ester (9CI) (CA INDEX NAME)

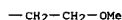
PAGE 1-A



PAGE 1-B

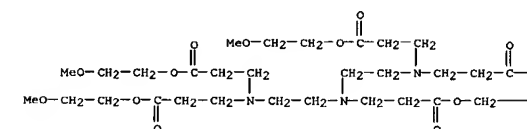


PAGE 1-C

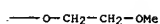


RN 64206-00-4 CAPLUS  
CN β-Alanine, N,N-bis[2-(bis[3-(2-methoxyethoxy)-3-oxopropyl]amino)ethyl]-, 2-methoxyethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A

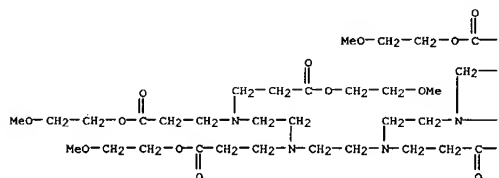


PAGE 1-B

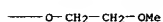
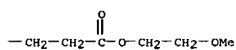
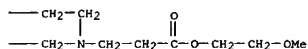


RN 64206-01-5 CAPLUS  
CN 4,7,10,13,16-Pentaazanonadecanedioic acid, 4,7,10,13,16-pentakis[3-(2-methoxyethoxy)-3-oxopropyl]-, bis(2-methoxyethyl) ester (9CI) (CA INDEX NAME)

PAGE 1-A

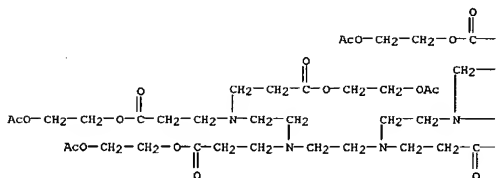


PAGE 1-B

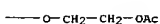
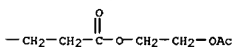
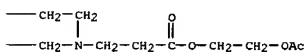


RN 64206-02-6 CAPLUS  
CN  $\beta$ -Alanine, N,N'-1,2-ethanediyibis[N-[3-[2-(acetyloxy)ethoxy]-3-oxopropyl]-, bis[2-(acetyloxy)ethyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A

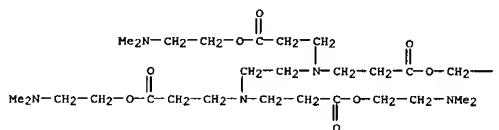


PAGE 1-B

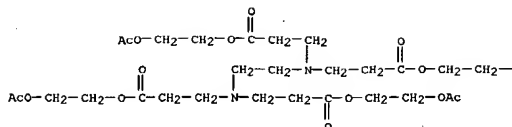


RN 64206-05-9 CAPLUS  
CN  $\beta$ -Alanine, N,N'-1,2-ethanediylbis[N-{3-[2-(dimethylamino)ethoxy]-3-oxopropyl}-, bis[2-(dimethylamino)ethyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-A

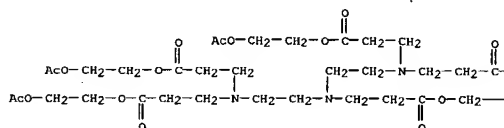


PAGE 1-B

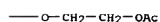


RN 64206-03-7 CAPLUS  
CN  $\beta$ -Alanine, N,N-bis[2-[bis[3-[2-(acetyloxy)ethoxy]-3-oxopropyl]amino]ethyl]-, 2-(acetyloxy)ethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



```

RN      64206-04-8  CAPLUS
CN      4,7,10,13,16-Pentaaazonanadecanedioic acid, 4,7,10,13,16-pentakis[3-[2-(
(CA     (acetyloxy)ethoxy)-3-oxopropyl]-, bis[2-(acetyloxy)ethyl] ester (9CI)
        INDEX NAME)

```

PAGE 1-B

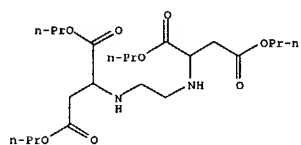


L4 ANSWER 49 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN

AB The title reaction afforded 17-23% cis-XCOCH:CHCONHCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub> (I; X = C<sub>2</sub>-C<sub>7</sub> n-alkoxy) and 64-75% XCOCH<sub>2</sub>CH(COX)NHCH<sub>2</sub>CH<sub>2</sub>NHCH(COX)CH<sub>2</sub>COX (II; X = same), isolated as the dihydrochlorides; these esters were converted to I and II (X = NHNH<sub>2</sub>) by treatment with N<sub>2</sub>H<sub>4</sub>·H<sub>2</sub>O. I (X = NHNH<sub>2</sub>) and HONO gave cis-N<sub>3</sub>COCH:CHCONHCH<sub>2</sub>CH<sub>2</sub>OH, which gave the unstable isocyanate on heating; the latter was trapped by heating in the presence of amines to give the urea deriva.

ACCESSION NUMBER: 1976:420570 CAPLUS  
DOCUMENT NUMBER: 85:20570  
TITLE: Reaction of maleic acid esters with ethylenediamine  
AUTHOR(S): Tanchuk, Yu. V.; Ral'chuk, I. A.  
CORPORATE SOURCE: Inst. Khim. Vysokomol. Soedin., Kiev, USSR  
SOURCE: Ukrainskii Khimicheskii Zhurnal (Russian Edition) (1976), 42(4), 390-4  
CODEN: UKZHAU; ISSN: 0041-6045

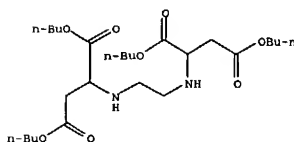
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 59518-47-7P 59518-48-8P 59518-49-9P  
59518-50-2P 59518-51-3P 59573-31-8P  
RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)  
RN 59518-47-7 CAPLUS  
CN Aspartic acid, N,N'-1,2-ethanediybis-, tetrapropyl ester, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

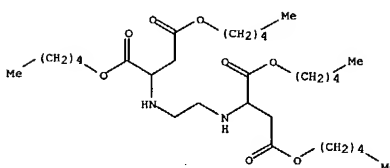
RN 59518-48-8 CAPLUS  
CN Aspartic acid, N,N'-1,2-ethanediybis-, tetrabutyl ester, dihydrochloride (9CI) (CA INDEX NAME)

L4 ANSWER 49 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



● 2 HCl

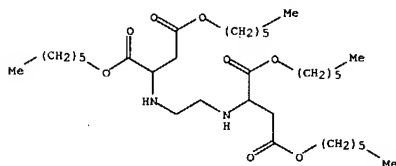
RN 59518-49-9 CAPLUS  
CN Aspartic acid, N,N'-1,2-ethanediybis-, tetrapentyl ester, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

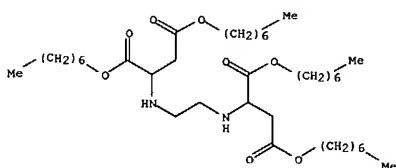
RN 59518-50-2 CAPLUS  
CN Aspartic acid, N,N'-1,2-ethanediybis-, tetrahexyl ester, dihydrochloride (9CI) (CA INDEX NAME)

L4 ANSWER 49 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



● 2 HCl

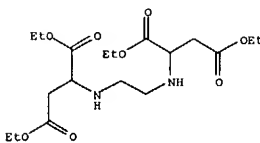
RN 59518-51-3 CAPLUS  
CN Aspartic acid, N,N'-1,2-ethanediybis-, tetraheptyl ester, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 59573-31-8 CAPLUS  
CN Aspartic acid, N,N'-1,2-ethanediybis-, tetraethyl ester, dihydrochloride (9CI) (CA INDEX NAME)

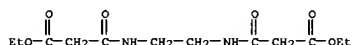
L4 ANSWER 49 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



● 2 HCl



L4 ANSWER 50 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STM  
 GI For diagram(s), see printed CA Issue.  
 AB  $\alpha$ - And  $\beta$ -aminocampholic acids (I, R = CH<sub>2</sub>NH<sub>2</sub>, R<sub>1</sub> = CO<sub>2</sub>H; R = CO<sub>2</sub>H, R<sub>1</sub> = CH<sub>2</sub>NH<sub>2</sub>) were prepared from camphor or camphoric anhydride via the nitriles. Cyclobutaneacetic acid II was obtained by reduction of DL-cis-pinonic acid oxime. 2-H<sub>2</sub>NCH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>C<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H-2 (III) was prepared by cleaving phenanthrenequinone monokime with SOCl<sub>2</sub> and reducing 2-NCC<sub>6</sub>H<sub>4</sub>C<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H-2. (HO<sub>2</sub>CCH<sub>2</sub>CONHCH<sub>2</sub>)<sub>2</sub> (IV) was prepared by treating EtO<sub>2</sub>CCH<sub>2</sub>COCl with H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub> and hydrolysis. I and II are antifibrinolytic, whereas III and IV are inactive. I (R = CH<sub>2</sub>NH<sub>2</sub>, R<sub>1</sub> = CO<sub>2</sub>H) is more active than its isomer.  
 ACCESSION NUMBER: 1976:31261 CAPLUS  
 DOCUMENT NUMBER: 84:31261  
 TITLE: Synthesis and antifibrinolytic properties of some  $\alpha$ -amino acids  
 AUTHOR(S): Mesnard, Pierre; Dupin, Jean P.; Brasington, Robert D.  
 CORPORATE SOURCE: Lab. Chim. Org. Controle Physicochim. Med., U.E.R. Sci. Pharm., Bordeaux, Fr.  
 SOURCE: European Journal of Medicinal Chemistry (1975), 10(3), 315-22  
 CODEN: EJMCA5; ISSN: 0223-5234  
 DOCUMENT TYPE: Journal  
 LANGUAGE: French  
 IT 13001-79-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and hydrolysis of)  
 RN 13001-79-1 CAPLUS  
 CN Propanoic acid, 3,3'-(1,2-ethanediyldiimino)bis[3-oxo-, diethyl ester (9CI) (CA INDEX NAME)]



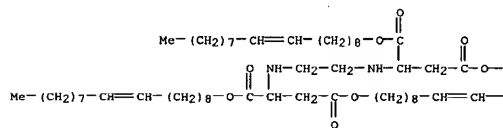
L4 ANSWER 51 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STM  
 AB C12-22 alkyl esters of maleic anhydride or fumaric or itaconic acids were treated with di-, tri-, or pentaamines, optionally containing OH groups, to give title adducts, which were optionally treated with epichlorohydrin [106-89-8] or propylene oxide [75-56-9], and used as fabric softeners in a quaternary ammonium or acid salt form. Thus, dioleoyl maleate [105-73-7] was treated with N,N-bis(3-aminopropyl)methylamine [105-83-9] to give diester-amine adduct (1) [52031-38-6] which was mixed with water and HCO<sub>2</sub>H to give a stable colorless emulsion containing I salt, that increased the softness of cotton tricot and sponge cloth 4 and 3.5 times, resp., that of untreated fabric.  
 ACCESSION NUMBER: 1974:451056 CAPLUS  
 DOCUMENT NUMBER: 81:51056  
 TITLE: Diester-amine adducts as fabric softeners  
 INVENTOR(S): Schaefer, Paul; Ibrahim, Jutta; Gysin, Hanspeter  
 PATENT ASSIGNEE(S): Ciba-Geigy A.-G.  
 SOURCE: Ger. Offen., 63 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2341045	A1	19740307	DE 1973-2341045	19730814
CH 575909	A	19760531	CH 1972-12348	19720821
ZA 7305394	A	19740731	ZA 1973-5394	19730808
AU 7359077	A1	19750213	AU 1973-59077	19730809
NL 7311206	A	19740225	NL 1973-11206	19730814
US 3979442	A	19760907	US 1973-388525	19730815
BE 803775	A1	19740220	BE 1973-134723	19730820
FR 2196992	A1	19740322	FR 1973-30213	19730820
GB 1419154	A	19751224	GB 1973-39341	19730820
ES 418013	A1	19760416	ES 1973-418013	19730820
IT 1002508	A	19760520	IT 1973-52080	19730820
AT 7307234	A	19761215	AT 1973-7234	19730820
AT 338224	B	19770810		
SU 561507	D	19770605	SU 1973-1959053	19730820
JP 49057196	A2	19740603	JP 1973-93007	19730821
JP 52047075	B4	19771130		
PRIORITY APPLN. INFO.:				
			CH 1973-12348	19720821
			CH 1973-11303	19730803

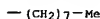
IT 52031-44-4P 52031-48-8P 52031-57-9P  
 52717-70-1P  
 RL: IMP (Industrial manufacture); PREP (Preparation)  
 (preparation of)  
 RN 52031-44-4 CAPLUS  
 CN Aspartic acid, N,N'-1,2-ethanediyldis-, tetra-9-octadecenyl ester, (all-2)- (9CI) (CA INDEX NAME)]

L4 ANSWER 51 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STM (Continued)

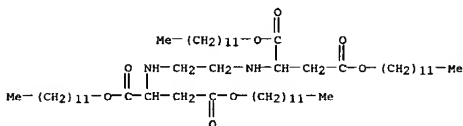
PAGE 1-A



PAGE 1-B



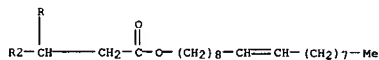
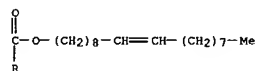
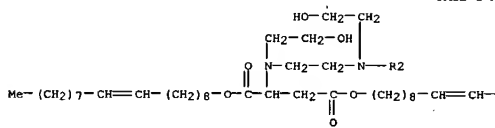
RN 52031-48-8 CAPLUS  
 CN Aspartic acid, N,N'-1,2-ethanediyldis-, tetradodecyl ester (9CI) (CA INDEX NAME)]



RN 52031-57-9 CAPLUS  
 CN Aspartic acid, N,N'-1,2-ethanediyldis-(N-(2-hydroxyethyl)-, tetra-9-octadecenyl ester, (all-2)- (9CI) (CA INDEX NAME)]

L4 ANSWER 51 OF 62 CAPLUS COPYRIGHT 2004 ACS ON STM (Continued)

PAGE 1-A

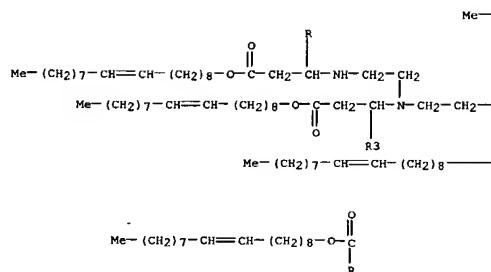


PAGE 1-B

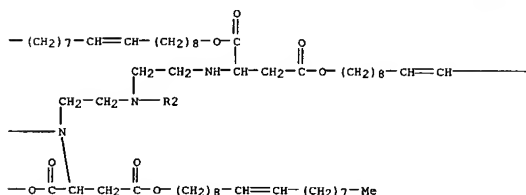


RN 52717-70-1 CAPLUS  
 CN 3,6,9,12,15-Pentaazazheptadecane-1,2,16,17-tetracarboxylic acid, 6,9,12-tris[3-(9-octadecenyl)oxy]-1-[(9-octadecenyl)oxy]carbonyl]-3-oxopropyl]-, tetra-9-octadecenyl ester, stereoisomer (9CI) (CA INDEX NAME)]

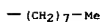
PAGE 1-A



PAGE 1-B

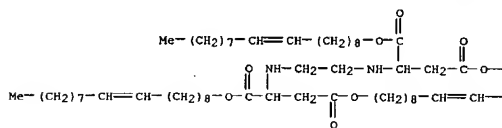


PAGE 1-C

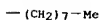
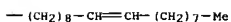


RN 52050-26-7 CAPLUS  
 CN Aspartic acid, N,N'-1,2-ethanediylbis-, tetra-9-octadecenyl ester, (all-Z)-, formate (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 52031-44-4  
 CMF C82 H152 N2 O8

PAGE 1-A



PAGE 1-B



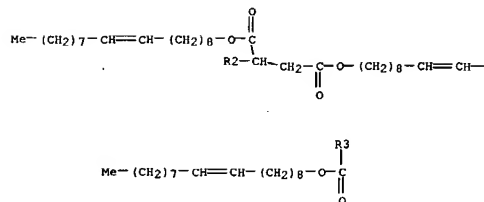
CM 2

CRN 64-18-6  
 CMF C H2 O2

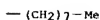


RN 52050-27-8 CAPLUS  
 CN Aspartic acid, N,N'-1,2-ethanediylbis-, tetra-9-octadecenyl ester, (all-Z)-, dimethyl phosphite (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 52031-44-4

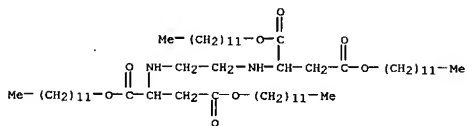
PAGE 2-A



PAGE 2-B



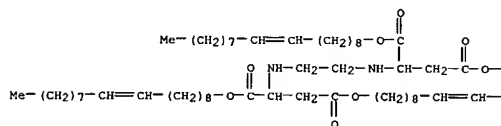
IT 52031-49-9 52050-26-7 52050-27-8  
 52050-28-9 52050-29-0  
 RL: USES (Uses)  
 (softening agents, for textiles)  
 RN 52031-49-9 CAPLUS  
 CN Aspartic acid, N,N'-1,2-ethanediylbis-, tetradodecyl ester, dimethyl phosphite (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 52031-48-8  
 CMF C58 H112 N2 O8



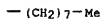
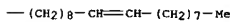
CM 2

CRN 96-36-6

PAGE 1-A



PAGE 1-B



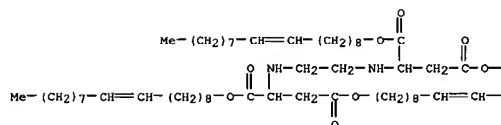
CM 2

CRN 96-36-6  
 CMF C2 H7 O3 P

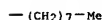
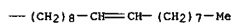


RN 52050-28-9 CAPLUS  
 CN Aspartic acid, N,N'-1,2-ethanediylbis-, tetra-9-octadecenyl ester, (all-Z)-, 2-hydroxypropanoate (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 52031-44-4  
 CMF C82 H152 N2 O8

PAGE 1-A



PAGE 1-B



CH 2  
CRN 50-21-5  
CMF C3 H6 O3



RN 52050-29-0 CAPLUS  
CN Aspartic acid, N,N'-1,2-ethanediylbis[N-(2-hydroxyethyl)-, tetra-9-octadecenyl ester, (all-Z)-, formate (salt) (9CI) (CA INDEX NAME)

CH 1  
CRN 52031-57-9  
CMF C86 H160 N2 O10

L4 ANSWER 52 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN

GI For diagram(s), see printed CA Issue.  
AB Nine methanesulfonic acid esters of aminoglycols were prepared. Their anticancer activities were evaluated against Yoshida sarcoma, mouse leukemia L-1210, and rat leukemia DBLA-6.

3,3'-(Morpholinopropylimino)di-1-propanol dimethanesulfonate (ester) dihydrochloride (I) and 3,3'-(dibutylaminopropylimino)di-1-propanol dimethanesulfonate (ester) dihydrochloride (II) were very active. II was unique in its effect against

rat leukemia DBLA-6 (GV) by the i.v. inoculations system.

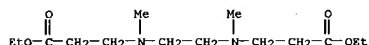
ACCESSION NUMBER: 1973:491518 CAPLUS  
DOCUMENT NUMBER: 79:91518  
TITLE: Synthesis and evaluation of the anticancer activity of

a new series of methanesulfonates  
AUTHOR(S): El-Merzabani, Mahmoud M.; Sakurai, Yoshio  
CORPORATE SOURCE: Cancer Inst., Cairo Univ., Cairo, Egypt  
SOURCE: Chemical & Pharmaceutical Bulletin (1973), 21(7), 1560-3  
CODEN: CPBTAL; ISSN: 0009-2363  
DOCUMENT TYPE: Journal  
LANGUAGE: English

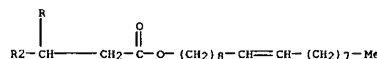
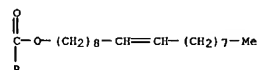
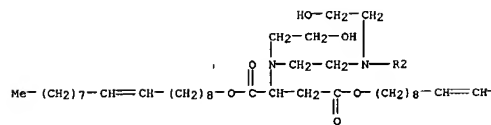
IT 42434-14-0P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 42434-14-0 CAPLUS

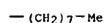
CN β-Alanine, N,N'-1,2-ethanediylbis[N-methyl-, diethyl ester (9CI) (CA INDEX NAME)



PAGE 1-A



PAGE 1-B



CH 2  
CRN 64-18-6  
CMF C H2 O2



L4 ANSWER 53 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN

GI For diagram(s), see printed CA Issue.  
AB The di-HBr salts of 7 title compds. [I, Q = (CH<sub>2</sub>)<sub>n</sub> (n = 2, 3, 4, 6, 8, or 12) and p-CH<sub>2</sub>CH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>], useful as bronchospasmolytics, were prepared by reaction with H<sub>2</sub>NQNH<sub>2</sub> with 3,4-(MeO)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>C-(CO<sub>2</sub>Et):CH<sub>2</sub> followed by reduction

with LiAlH<sub>4</sub> and reaction with BBr<sub>3</sub> or by debenzoylation of II.

ACCESSION NUMBER: 1973:97320 CAPLUS  
DOCUMENT NUMBER: 78:97320  
TITLE: N,N'-Bis[3-hydroxy-2-[(3,4-dihydroxyphenyl)propyl]alkylenediamines  
INVENTOR(S): Bastian, Jean Michel; Hasspacher, Klaus  
PATENT ASSIGNEE(S): Sandoz Ltd.  
SOURCE: Ger. Offen., 16 pp.  
CODEN: GWXXBX

DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

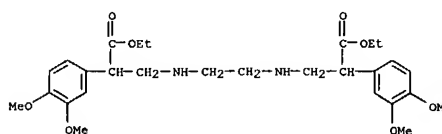
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2230539	A1	19730111	DE 1972-2230539	19720622
CH 545763	A	19740215	CH 1971-9347	19710625
CH 546737	A	19740315	CH 1971-12494	19710826
NL 7208391	A	19721228	NL 1972-8391	19720620
HU 163935	P	19731128	HU 1972-SA2368	19720620
US 3888829	A	19750610	US 1972-264422	19720620
DD 99568	C	19730820	DD 1972-163907	19720622
BE 785389	A1	19721227	BE 1972-119129	19720623
FR 2143344	A1	19730202	FR 1972-22697	19720623
AU 7243904	A1	19740103	AU 1972-43904	19720626
PRIORITY APPLN. INFO.:				CH 1971-9347
				19710625
				CH 1971-12494
				19710826

IT 40722-22-3P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

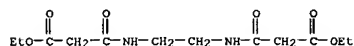
RN 40722-22-3 CAPLUS

CN Benzeneacetic acid, α,α'-[1,2-ethanediylbis(iminomethylene)]bis[3,4-dimethoxy-, diethyl ester, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

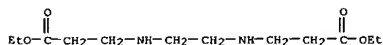
L4 ANSWER 54 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Conversion of  $\beta$ -alkoxy- and  $\beta$ -alkylthio- $\beta$ -chloroacryloyl chlorides R1YCCl:CRCCl (R = H, alkyl, R1 = alkyl and Y = O or S) with amines R2NH2 yields the expected carboxamides R1YCCl:CRCONHR2. Phenylhydrazine reacts with  $\beta$ -alkoxy- $\beta$ -chloroacryloyl chlorides to give a mixture of 3-alkoxy-1-phenyl-2-pyrazolin-5-ones and 5-alkoxy-1-phenyl-4-pyrazolin-3-ones.  
 ACCESSION NUMBER: 1971:476679 CAPLUS  
 DOCUMENT NUMBER: 75:76679  
 TITLE: Pyrazolones and amides from  $\beta$ -alkoxy- and  $\beta$ -alkylthio- $\beta$ -chloroacryloyl chlorides  
 AUTHOR(S): Van den Bosch, G.; Bos, H. J. T.; Arens, J. F.  
 CORPORATE SOURCE: Lab. Org. Chem., Univ. Utrecht, Utrecht, Neth.  
 SOURCE: Recueil des Travaux Chimiques des Pays-Bas (1971), 90(6), 601-10  
 CODEN: RTCPA3; ISSN: 0165-0513  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 13001-79-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)  
 RN 13001-79-1 CAPLUS  
 CN Propanoic acid, 3,3'-(1,2-ethanediyldiimino)bis[3-oxo-, diethyl ester (9CI) (CA INDEX NAME)]



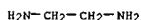
L4 ANSWER 55 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Polyethylene sulfide and polypropylene sulfide with improved stability are prepared containing 2.5% N-substituted polyethylenimines,  $\beta$ -propiolactone-N-substituted ethylenimine copolymers, or the addition products of a diamino diester such as [EtO2C(CH2)2NH]2(CH2)2 with H2N(CH2)2NH2.  
 ACCESSION NUMBER: 1969:12313 CAPLUS  
 DOCUMENT NUMBER: 70:12313  
 TITLE: Stabilizers for polysulfides  
 INVENTOR(S): Weill, Julien  
 PATENT ASSIGNEE(S): Ethylene-Plastique  
 SOURCE: Fr., 7 pp.  
 CODEN: FRXXAK  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1507325		19671229	FR	19661117
GB 1188032			GB	

IT 28504-12-3  
 RL: USES (Uses) (stabilizers, for polysulfide)  
 RN 28504-12-3 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-ethylenedi-, diethyl ester, polymer with ethylenediamine (8CI) (CA INDEX NAME)  
 CM 1  
 CRN 19294-22-5  
 CMP C12 H24 N2 O4

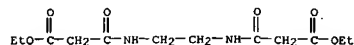


CM 2  
 CRN 107-15-3  
 CMP C2 H8 N2

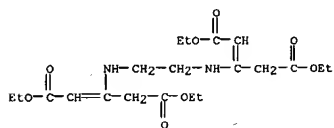


RL: USES (Uses) (stabilizers, for polysulfides)

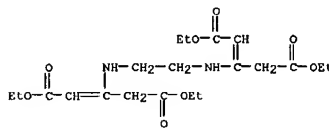
L4 ANSWER 56 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB cf. CA 63, 16389a; U.S. 3,030,359, CA 57, 11024g. (Cl3C)2CO (0.1 mole) and 0.15 mol. EtOC.tplbond.CH (I) mixed at room temperature and the mixture kept 24 hrs. and distilled gave 70% (CCl3)2C:CHCO2Et, b0.33 122-4°, n 1.5330 (all n20D), m. 51.8-2.5° (petr. ether); CCl3CHO and I kept 5 days gave 17% CCl3CH:CHCO2Et, b10 .apprx.100°, n 1.482. To CCl3 in Et2O (.apprx.2M) at -20 to 0° was added an equimolar amount of RC.tplbond.CH and the whole kept 60 hrs. at 10-20° and distilled to give the following RC(COCl):CClOR\* (R, R', b.p./mm., n, and % yield given): H, Me, 55-57°/0.05, 1.5262, 77; H, Et (II), 55-58°/0.12, 1.5143, 74; H, Pr, 70-3°/0.03, 1.5074, 66; Me, Et, 42.5-44.5°/0.003, 1.5049, 91; Et, Et, 44.5-5.5°/0.004, 1.4981, 82; Pr, Et, 55-8°/0.02, 1.4920, 82. To 0.048 mole (H2NCH2)2 in 60 ml. dry Et2O was added dropwise at 20-30° 0.048 mole II, the whole stirred 1 hr., and the solid filtered off and washed with H2O to give 57% (EtOCCl:CHCONHCH2)2 (III), m. 153-4° (Me2CO). III (0.15 mole) in 100 ml. absolute EtOH was saturated with HCl at 10-20° and the whole kept 60 hrs. and evaporated to give 59% (EtO2CCH2CONHCH2)2, m. 127.5-8.5° (Me2CO). To 0.2 mole I in 150 ml. CH2Cl2 at -70° was added 0.1 mole SCl2: a violent reaction occurred. The whole kept 2 hrs. at -70°, concentrated, and the residue distilled gave EtOCCl:CHSCH:CClOEt (IV), b0.03 90-6°. IV in absolute EtOH and HCl as above gave 86% (EtO2CCH2)2S, b0.006 72-6°, n 1.4668. The reaction mechanisms are discussed and the IR, N.M.R., and mass spectral data of the compds. are presented.  
 ACCESSION NUMBER: 1966:456411 CAPLUS  
 DOCUMENT NUMBER: 65:56411  
 ORIGINAL REFERENCE NO.: 65:10485b-d  
 TITLE: Chemistry of acetylenic ethers. LXXXI. Synthesis of  $\beta$ -alkoxy- $\beta$ -chloroacrylic chlorides by addition of phosgene to 1-alkynyl ethers  
 AUTHOR(S): Van den Bosch, G.; Bos, H. J. T.; Arens, J. F.  
 SOURCE: Recueil des Travaux Chimiques des Pays-Bas (1966), 85(6), 567-79  
 CODEN: RTCPA3; ISSN: 0165-0513  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 65:56411  
 IT 13001-79-1, Malonic acid, N,N'-ethylenedi-, diethyl ester (preparation of)  
 RN 13001-79-1 CAPLUS  
 CN Propanoic acid, 3,3'-(1,2-ethanediyldiimino)bis[3-oxo-, diethyl ester (9CI) (CA INDEX NAME)]



L4 ANSWER 57 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 GI For diagram(s), see printed CA Issue.  
 AB Condensation of ethylenediamine with  $\beta$ -oxo esters in ethanol at 60° gave I and II (R = Me, CO<sub>2</sub>Et, CH<sub>2</sub>CO<sub>2</sub>Et). The addnl. H-bond stabilization in the enamine II (R = CH<sub>2</sub>CO<sub>2</sub>Et) favors the formation of this tautomer rather than I.  
 ACCESSION NUMBER: 1965:90241 CAPLUS  
 DOCUMENT NUMBER: 62:90241  
 ORIGINAL REFERENCE NO.: 62:16045a-b  
 TITLE: The reaction of ethylenediamine with  $\beta$ -oxo esters. Evidence for ketimine-enamine tautomerism  
 AUTHOR(S): Hay, R. W.; Caughley, B. P.  
 CORPORATE SOURCE: Victoria Univ., Wellington  
 SOURCE: Chemical Communications (London) (1965), (4), 58  
 CODEN: CCOMA8; ISSN: 0009-241X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 1695-81-4, Glutaconic acid, 3,3'-(ethylenediimino)di-, tetraethyl ester  
 (preparation of)  
 RN 1695-81-4 CAPLUS  
 CN Glutaconic acid, 3,3'-(ethylenediimino)di-, tetraethyl ester (7CI, 8CI)  
 (CA INDEX NAME)



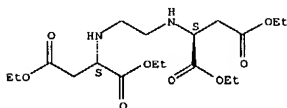
L4 ANSWER 58 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Methyl and ethyl formate were irradiated, at room temperature in an atmospheric of N<sub>2</sub>, with a 450 w. high pressure Hg arc lamp, for 15 hrs. and 25 hrs., resp. The photolysis of methyl formate yielded HCHO, Me<sub>2</sub>CO, MeOH, acetonylacetone and gaseous products such as CO, CO<sub>2</sub>, CH<sub>4</sub>, and C<sub>6</sub>H<sub>6</sub>. Ethyl formate yielded AcH, Me<sub>2</sub>CO, EtOH, methyl ethyl ketone and ethyl ether as well as the above gaseous products together with C<sub>2</sub>H<sub>4</sub>. The results suggested that there are 3 main primary steps: HCO<sub>2</sub>R +  $\gamma$  + OH $\cdot$  +  $\cdot$ OR;  $\rightarrow$  H $\cdot$  +  $\cdot$ CO<sub>2</sub>R;  $\rightarrow$  HCOO $\cdot$  +  $\cdot$ R.  
 ACCESSION NUMBER: 1965:90240 CAPLUS  
 DOCUMENT NUMBER: 62:90240  
 ORIGINAL REFERENCE NO.: 62:16044h,16045a  
 TITLE: Photolyses of alkyl esters  
 AUTHOR(S): Tominaga, Tamotsu; Odaira, Yoshinobu; Tsutsumi, Shigeru  
 SOURCE: Technology Reports of the Osaka University (1964), 14(635), 973-6  
 CODEN: TROUAI; ISSN: 0030-6177  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 1695-81-4, Glutaconic acid, 3,3'-(ethylenediimino)di-, tetraethyl ester  
 (preparation of)  
 RN 1695-81-4 CAPLUS  
 CN Glutaconic acid, 3,3'-(ethylenediimino)di-, tetraethyl ester (7CI, 8CI)  
 (CA INDEX NAME)



L4 ANSWER 59 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Salts of unsatd. di- and tricarboxylic acids were treated with diamines to give bisadducts. Thus, 400 g. maleic anhydride (I) was added to 400 ml. H<sub>2</sub>O. After standing 1 hr., 700 g. 50% aqueous NaOH was added at 75-85° and then 170 g. 70% (CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub> (II). The mixture was heated at reflux 48 hrs., cooled, and acidified with 680 ml. concentrated HCl to give 92.2% [CH<sub>2</sub>NHCH(CH<sub>2</sub>CO<sub>2</sub>H)CO<sub>2</sub>H]<sub>2</sub>, (III), m. 220-2°. The di- and pentahydrate of III were also prepared. In a similar manner were prepared analogs of III (acid or anhydride, base, and amine used, yield, and m.p. of product given): fumaric acid, NaOH, II, 75% III, 220-2°; I, NaOH, HN(CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub> (IV), 57%, 208-10°; I, NaOH, H<sub>2</sub>N(CH<sub>2</sub>)<sub>6</sub>NH<sub>2</sub> (V), 58%, --; I, NaOH, HOCH(CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub>, 90%, --; aconitic acid (VI), N(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>3</sub> (VII), IV, 21% NH[CH<sub>2</sub>CH<sub>2</sub>NHC(CH<sub>2</sub>CO<sub>2</sub>H)<sub>2</sub>CO<sub>2</sub>H]<sub>2</sub> (VIII) or isomer, decomposed 230°; VI, VII, V, 63% 3Zn++ salt, --; I, VII, CH<sub>2</sub>(C<sub>6</sub>H<sub>4</sub>NH<sub>2</sub>-4)<sub>2</sub> (IX), 70% di-Zn++ salt, --; itaconic acid, VII, IX, 21% 1,1'-methylenebis(p-phenylenebis[2-pyrrolidone-4-carboxylic acid]), 200-10°; I, NaOH, 1,3-C<sub>6</sub>H<sub>4</sub>(CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub>, 95% 2Ca++ salt, free acid m. 155°. Reaction of 29.2 g. III with 53 g. oleylamine at 160° 1 hr. gave 75 g. of a di-N-oleylamide. Treatment of 120 g. urea with 146 g. III at 130-40° 2 hrs. gave 244 g. of a glassy polymer. The following derivs. of III were also prepared: H<sub>2</sub>SO<sub>4</sub> and di-HCl salts; tetraethyl ester (99%); di-Na+ salt (32%); di-NH<sub>4</sub>+ salt (65.6%); Ba++ salt (93.5%); Pb++, Cu++, and Mn++ salts. These materials are useful for removing rust and oxide coatings from metals.  
 ACCESSION NUMBER: 1965:43538 CAPLUS  
 DOCUMENT NUMBER: 62:43538  
 ORIGINAL REFERENCE NO.: 62:7643f-h  
 TITLE: Bisadducts of diamines and unsaturated acids  
 INVENTOR(S): Kezerian, Charles; Ramsey, William M.  
 PATENT ASSIGNEE(S): Stauffer Chemical Co.  
 SOURCE: 13 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3158635		19641124	US	19590318
IT 1115-44-2		Aspartic acid, N,N'-ethylenedi-, tetraethyl ester (preparation of)		
RN 1115-44-2		CAPLUS		
CN		L-Aspartic acid, N,N'-1,2-ethanediyldis-, tetraethyl ester (9CI) (CA INDEX NAME)		

Absolute stereochemistry.



L4 ANSWER 59 OF 62 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

GI For diagram(s), see printed CA issue.  
 AB The title compds. can be used as chelating agents. Maleic anhydride (400 g.) is added to 400 ml. H<sub>2</sub>O, the mixture is kept for 1 hr., neutralized with

700 g. 50% NaOH at 75-85°, and 170 g. 70% ethylenediamine added. The mixture is digested at >95°, refluxed 48 hrs., and the pH is adjusted to 2.0 with 680 ml. concentrated HCl to give 540 g. ethylenediamine-N,N'-disuccinic acid (I), m. 220-2°, 92.2% yield. Similarly prepared are 1.2HCl; diethylenetriamine-N,N'-disuccinic acid,

m. 208-10°; tetraethylenepentamine-N,N'-disuccinic acid; hexamethylenediamine-N,N'-disuccinic acid; HN(CH<sub>2</sub>CH<sub>2</sub>NHC(CO<sub>2</sub>H)(CH<sub>2</sub>CO<sub>2</sub>H)<sub>2</sub>)<sub>2</sub> or the β-isomer, m. approx. 230° (decomposition); p,p'-methyleneedianiline-N,N'-disuccinic acid; diphenylmethane-p,p'-bis-(2-pyrrolidone-4-carboxylic acid) (Ia), m. 200-10°; ethylenediamine-N,N'-bis(2-hydroxyethyl)-N,N'-disuccinic acid (II), m. 169.5-69° (decomposition); tetrasodium ethylenediamine-N,N'-bis(2-hydroxyethyl)-N,N'-disuccinate-10H<sub>2</sub>O; dibarium salt of II; Pb dihydrogen salt of II; Zn dihydrogen salt of II; cupric dihydrogen salt of II;

ferric dihydrogen salt of II; diethylenetriamine-N,N',N'-tris(2-hydroxyethyl)-N,N'-disuccinic acid; tetraethylenepentamine-N,N<sub>1</sub>N<sub>2</sub>N<sub>3</sub>N<sub>4</sub>-pentakis(2-hydroxyethyl)-N,N<sub>4</sub>-disuccinic acid (III); III.5HCl; ethylenediamine-N,N'-bis(2,3-dihydroxypropane)-N,N'-disuccinic acid (IV); tetrasodium salt of IV; dibarium salt of IV; hexamethylenediamine-N,N'-bis(2,3-dihydroxypropane)-N,N'-disuccinic acid; ethylenediamine-N,N'-bis(3-hydroxypropane)-N,N'-disuccinic acid; ethylenediamine-N,N'-bis(tetraglycol)-N,N'-disuccinic acid (V); di-zinc salt of V; ethylenediamine-N,N'-bis(2-hydroxy-2-phenylethane)-N,N'-disuccinic acid; ethylenediamine-N,N'-bis(3-phenoxy-2-hydroxypropane)-N,N'-disuccinic acid;

acid: ethylenediamine-N,N'-disuccinic acid)-N,N'-diacetic acid; octasodium ethylenediamine-N,N'-bis(methanephosphonate)-N,N'-disuccinate;

tetbarium ethylenediamine-N,N'-bis(methanephosphonate)-N,N'-disuccinate; and m-dixylol-a,a'-diamine-N,N'-diacetic acid-N,N'-disuccinic acid.

ACCESSION NUMBER: 1963:415382 CAPLUS  
 DOCUMENT NUMBER: 59:15382  
 ORIGINAL REFERENCE NO.: 59:2724h, 2725a-d  
 TITLE: Polyalkylenepolyaminealkylenepolycarboxylic acids  
 INVENTOR(S): Ramey, William M.; Kerzerian, Charles  
 PATENT ASSIGNEE(S): Victor Chemical Works  
 SOURCE: 14 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3077487		19630212	US	19590617
IT 1115-44-2				
Aspartic acid, N,N'-ethylenedi-, tetraethyl ester (preparation of)				
RN 1115-44-2				
CAPLUS				
CN L-Aspartic acid, N,N'-1,2-ethanediyibis-, tetraethyl ester (9CI) (CA INDEX NAME)				

Absolute stereochemistry.

AB Nitro alcs. are condensed with nitro acids or acid halides to form esters useful as high explosives. Thus, 0.002 mole of AlCl<sub>3</sub> was added to a solution

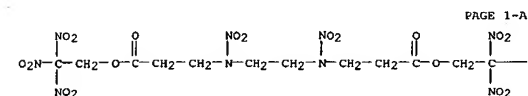
of 0.02 mole 2,2,2-trinitroethanol in 50 ml. of dry ethylene dichloride (I). To the yellow solution 0.01 mole 4,7-dinitraza-1,10-decane-diyl chloride was added, and the mixture refluxed until evolution of HCl gas

had ceased. The black mixture was cooled, filtered, and the solid washed with cold, dilute HCl, H<sub>2</sub>O, dried, and recrystd. from I by using charcoal to give

5.3 g. (85.5%) white crystals, m. 126-8°, calculated to be bis(2,2,2-trinitro-ethyl) 4,7-dinitraza-1,10-decane-dioate. Similarly, bis-(2,2,2-trinitroethyl) 4,4,6,6,8,8-hexanitro-1,11-undecane-dioate, m. 117-18°; 3,6-dinitraza-1,8-octanedioate, m. 195-7°; 4,4-dinitro-1,7-heptanedioate, m. 170-1°; 4-nitraza-1,7-heptanedioate, m. 110-11°; and 3-nitraza-1,5-pentanedioate, m. 160-160.5°, were prepared

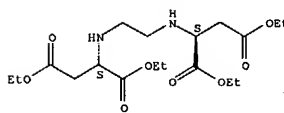
ACCESSION NUMBER: 1962:67891 CAPLUS  
 DOCUMENT NUMBER: 56:67891  
 ORIGINAL REFERENCE NO.: 56:13154b-d  
 TITLE: Explosive polynitro esters  
 INVENTOR(S): Frankel, Milton B.  
 PATENT ASSIGNEE(S): Aero-jet-General Corp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2978494		19610404	US	19550620
IT 97434-56-5				
β-Alanine, N,N'-ethylenebis(N-nitro-, bis(2,2,2-trinitroethyl) ester (preparation of)				
RN 97434-56-5				
CAPLUS				
CN β-Alanine, N,N'-ethylenebis(N-nitro-, bis(2,2,2-trinitroethyl) ester (7CI) (CA INDEX NAME)				



PAGE 1-B

—NO<sub>2</sub>



AB The addition of primary aliphatic amines to Et crotonate (I) and to the 3-crotonate ester (II) of 1,2:5,6-di-O-isopropylidene-α-D-glucofuranose (III) occurred by β-addition to the double bond, but the 3-(2-butenyl) ether (IV) or 3-allyl ether (V) of III did not react likewise. I also underwent deesterification and amide formation on aminolysis. Aminolysis of II with amino derivs. of sugars (cf. preceding abstract) gave adducts analogous to those obtained with simple amines.

The adducts from II were readily hydrolyzed to give III and the corresponding acid derivative. The significance of these observations in cross-linking reactions applicable to cellulose was discussed. I (100 g.) in 100 ml. MeOH was added during 5 hrs. to a refluxing solution of 60 g. ethylenediamine.

(VI) in 200 ml. MeOH under N. After 24 hrs. at reflux the solution was evaporated, and the residue sublimed repeatedly to give 17 g. 3-[(2-aminoethyl)amino]butyric lactam (VII), m. 113-14° (EtOAc); picrate m. 242°; acetate m. 100-1°. Hydrolysis of 2 g. VII with 10% HCl 4 hrs. under reflux gave 2 g. 3-[(2-aminoethyl)amino]butyric acid di-HCl salt (VIII), m. 150-1° (EtOH-Et<sub>2</sub>O), which with EtOH-HCl gave VIII Et ester (IX), m. 111° (C<sub>6</sub>H<sub>6</sub>-EtOH). Reaction of 30 g. I with 8 g. VI in 100 ml. EtOH 5.5 days at 4° gave, after concentration and heating with H<sub>2</sub>O, 5.5 g. N,N'-ethylenebis(3-aminobutyric acid) (X), m. 216-18° (aqueous EtOH), dipicrate m. 205-6°, di-Et ester di-HCl m. 194-5°. X Cu salt was prepared I (18.5 g.) was kept 6 days at 4° with 18.5 g. mono-N-acetyl derivative of VI and 70 ml. EtOH, a small amount of solid m. 293° (decomposition) was filtered off, the solution

was concentrated, H<sub>2</sub>O was added, excess I was extracted with Et<sub>2</sub>O, and the aqueous phase was concentrated giving 17.5 g. 3-[(2-acetamido-ethyl)amino]butyric acid (XI), m.

159-60° (EtOH-Et<sub>2</sub>O). Saponification of 2 g. XI with boiling aqueous KOH, followed by the treatment with HCl and EtOH gave 0.9 g. VIII, m. 151-2°, and 1.4 g. IX, m. 111-12°. Treatment of crotonic acid with 2-aminoethanol (XII) in EtOH 18 hrs. at room temperature gave

69% (2-hydroxyethyl)ammonium crotonate (XIII), m. 85-90° (Me<sub>2</sub>CO-petr. ether), which reacted with acid KMnO<sub>4</sub> at 23° (time in hrs., moles O consumed given): 0.25, 4.80; 0.5, 4.85; 1, 5.35; 5, 5.88. XIII rearranged

on standing or on heating to 100° giving 3-[(2-hydroxy-ethyl)amino]butyric acid (XIV), m. 181.5-3.5° (EtOH-petr. ether). In contrast ethylenediammonium crotonate, m. 121.5-2.5° was stable on storage or at 100°. The Na salt of III was treated with crotonyl chloride (or III was treated with crotonic anhydride and C<sub>5</sub>H<sub>5</sub>N) to give II, m. 65.5-7.0° (after distillation), [α]<sub>D</sub><sup>20</sup> -48.4° (c 4.7, CHCl<sub>3</sub>). III (1 g.), 0.4 g. NaOH, and 5 ml. dioxane were stirred at 45° during the addition of 4 ml. 2-butenyl bromide, stirring was continued 4.5 hrs. at 50-60°, H<sub>2</sub>O was added, the product was extracted with CHCl<sub>3</sub>, the extract was washed with H<sub>2</sub>O, dried, and evaporated giving 1.2 g.

IV, b.p. 0.2 120° (bath), n<sub>D</sub><sup>20</sup> 1.4602, [α]<sub>D</sub><sup>20</sup> -18.8° (c 1.3, CHCl<sub>3</sub>). V, b.p. 0.05 113° (bath), n<sub>D</sub><sup>20</sup> 1.4570, [α]<sub>D</sub><sup>20</sup> -12.7° (c 2.4, CHCl<sub>3</sub>), was prepared similarly. II (3.691 g.) in 75 ml. Et<sub>2</sub>O was kept 70 hrs. at room temperature with 0.675 ml. XII to give

4.458 g. III 3-[(2-hydroxyethyl)amino]butyrate (XV), b.p. 0.05 140°. Treatment of XV with p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>Cl in C<sub>5</sub>H<sub>5</sub>N gave sirupy XV bis(p-toluenesulfonate). XV crystallized on standing; extraction with petr. ether



=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	300.40	456.03

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-43.40	-43.40

FILE 'REGISTRY' ENTERED AT 18:28:41 ON 30 SEP 2004  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 29 SEP 2004 HIGHEST RN 754169-63-6  
DICTIONARY FILE UPDATES: 29 SEP 2004 HIGHEST RN 754169-63-6

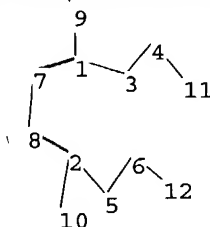
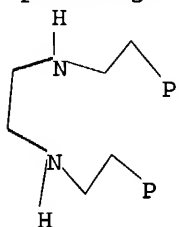
TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>  
Uploading C:\Program Files\Stnexp\Queries\10643855.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12

chain bonds :

1-3 1-7 1-9 2-5 2-8 2-10 3-4 4-11 5-6 6-12 7-8

exact/norm bonds :

1-3 1-7 2-5 2-8

exact bonds :

1-9 2-10 3-4 4-11 5-6 6-12 7-8

Match level :

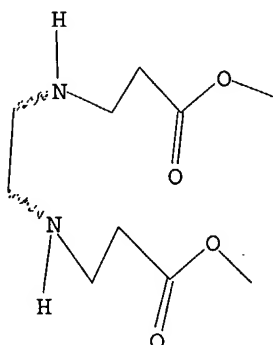
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS  
10:CLASS 11:CLASS 12:CLASS



L5 STRUCTURE UPLOADED

=> d query

L5 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 15

SAMPLE SEARCH INITIATED 18:32:45 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 5202 TO ITERATE

19.2% PROCESSED 1000 ITERATIONS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS: 99716 TO 108364  
PROJECTED ANSWERS: 0 TO 0

L6 0 SEA SSS SAM L5

=> s 15 full

FULL SEARCH INITIATED 18:32:51 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 105573 TO ITERATE

100.0% PROCESSED 105573 ITERATIONS  
SEARCH TIME: 00.00.01

98 ANSWERS

L7 98 SEA SSS FUL L5

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
157.94	613.97

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-43.40

CA SUBSCRIBER PRICE

FILE 'CAPLUS' ENTERED AT 18:32:57 ON 30 SEP 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 30 Sep 2004 VOL 141 ISS 14  
FILE LAST UPDATED: 29 Sep 2004 (20040929/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l7  
L8            64 L7  
  
=> d l8 50-64 abs ibib hitstr

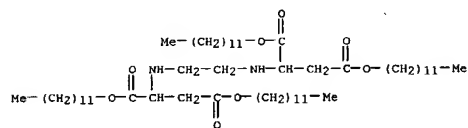
L8 ANSWER 50 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
AB C12-22 alkyl esters of maleic anhydride or fumaric or itaconic acids were treated with di-, tri-, or pentaamines, optionally containing OH groups, to give title adducts, which were optionally treated with epichlorohydrin [106-89-8] or propylene oxide [75-56-9], and used as fabric softeners in a quaternary ammonium or acid salt form. Thus, dioleil maleate [105-73-7] was treated with N,N-bis(3-aminopropyl)methylamine [105-83-9] to give diester-amine adduct (I) [52031-38-6] which was mixed with water and HCO2H to give a stable colorless emulsion containing I salt, that increased the softness of cotton tricot and sponge cloth 4 and 3.5 times, resp., that of untreated fabric.

ACCESSION NUMBER: 1974:451056 CAPLUS  
DOCUMENT NUMBER: 81:51056  
TITLE: Diester-amine adducts as fabric softeners  
INVENTOR(S): Schaefer, Paul; Ibrahim, Jutta; Gysin, Hanspeter  
PATENT ASSIGNEE(S): Ciba-Geigy A.-G.  
SOURCE: Ger. Offen., 63 pp.  
CODEN: GWXXDX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2341045	A1	19740307	DE 1973-2341045	19730814
CH 575909	A	19760531	CH 1972-12348	19720821
ZA 7305394	A	19740731	ZA 1973-5394	19730808
AU 7359077	A1	19750213	AU 1973-59077	19730809
NL 7311206	A	19740225	NL 1973-11206	19730814
US 3979442	A	19760907	US 1973-388525	19730815
BE 803775	A1	19740220	BE 1973-134723	19730820
FR 2196992	A1	19740322	FR 1973-30213	19730820
GB 1419154	A	19751224	GB 1973-39341	19730820
ES 418013	A1	19760416	ES 1973-418013	19730820
IT 1002508	A	19760520	IT 1973-52080	19730820
AT 7307234	A	19761215	AT 1973-7234	19730820
AU 338224	B	19770810		
SU 561507	D	19770605	SU 1973-1959053	19730820
JP 49057196	A2	19740603	JP 1973-93007	19730821
JP 52047075	B4	19771130		
PRIORITY APPLM. INFO.:			CH 1972-12348	19720821
			CH 1973-11303	19730803

IT 52031-44-4P 52031-48-8P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of)  
RN 52031-44-4 CAPLUS  
CN Aspartic acid, N,N'-1,2-ethanedilylbis-, tetra-9-octadecenyl ester, (all-Z)- (9CI) (CA INDEX NAME)

L8 ANSWER 50 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

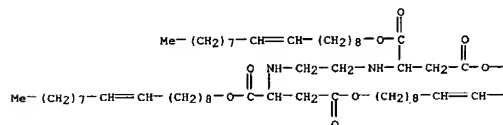


CM 2  
CRN 96-36-6  
CMF C2 H7 O3 P

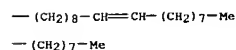


RN 52050-26-7 CAPLUS  
CN Aspartic acid, N,N'-1,2-ethanedilylbis-, tetra-9-octadecenyl ester, (all-Z)-, formate (9CI) (CA INDEX NAME)  
CM 1  
CRN 52031-44-4  
CMF C82 H152 N2 O8

PAGE 1-A

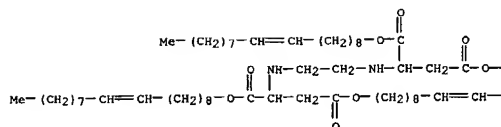


PAGE 1-B

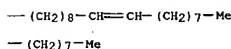


L8 ANSWER 50 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

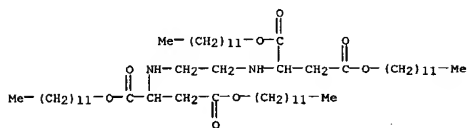
PAGE 1-A



PAGE 1-B



RN 52031-48-8 CAPLUS  
CN Aspartic acid, N,N'-1,2-ethanedilylbis-, tetradodecyl ester (9CI) (CA INDEX NAME)



IT 52031-49-9 52050-26-7 52050-27-8  
52050-28-9  
RL: USES (Uses)  
(softening agents, for textiles)  
RN 52031-49-9 CAPLUS  
CN Aspartic acid, N,N'-1,2-ethanedilylbis-, tetradodecyl ester, dimethyl phosphite (9CI) (CA INDEX NAME)  
CM 1  
CRN 52031-48-8  
CMF C58 H112 N2 O8

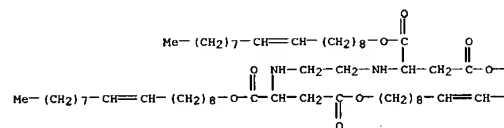
L8 ANSWER 50 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

CM 2  
CRN 64-18-6  
CMF C H2 O2

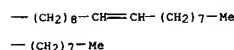


RN 52050-27-8 CAPLUS  
CN Aspartic acid, N,N'-1,2-ethanedilylbis-, tetra-9-octadecenyl ester, (all-Z)-, dimethyl phosphite (9CI) (CA INDEX NAME)  
CM 1  
CRN 52031-44-4  
CMF C82 H152 N2 O8

PAGE 1-A



PAGE 1-B



CM 2  
CRN 96-36-6  
CMF C2 H7 O3 P

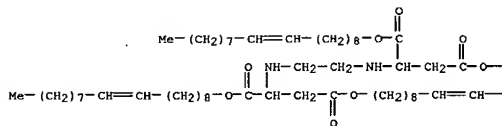


RN 52050-28-9 CAPLUS  
CN Aspartic acid, N,N'-1,2-ethanedilylbis-, tetra-9-octadecenyl ester, (all-Z)-, 2-hydroxypropanoate (9CI) (CA INDEX NAME)

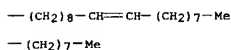
L8 ANSWER 50 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
CM 1

CRN 52031-44-4  
CMF C82 H152 N2 O8

PAGE 1-A



PAGE 1-B



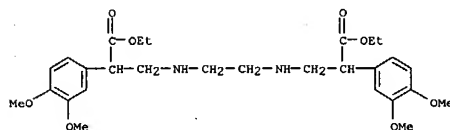
CM 2  
CRN 50-21-5  
CMF C3 H6 O3



L8 ANSWER 51 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
GI For diagram(s), see printed CA issue.  
AB The di-HBr salts of 7 title compds. [I, Q = (CH<sub>2</sub>)<sub>n</sub> (n = 2, 3, 4, 6, 8, or 12) and p-CH<sub>2</sub>CH<sub>2</sub>C<sub>6</sub>H<sub>4</sub>], useful as bronchospasmolytics, were prepared by reaction with H<sub>2</sub>NQNH<sub>2</sub> with 3,4-(MeO)<sub>2</sub>C<sub>6</sub>H<sub>3</sub>C-(CO<sub>2</sub>Et)<sub>2</sub>CH<sub>2</sub> followed by reduction with LiAlH<sub>4</sub> and reaction with BBr<sub>3</sub> or by debenzoylation of II.  
ACCESSION NUMBER: 1973:97320 CAPLUS  
DOCUMENT NUMBER: 78:97320  
TITLE: N,N'-Bis[3-hydroxy-2-(3,4-dihydroxyphenyl)propyl]alkylenediamines  
INVENTOR(S): Bastian, Jean Michel; Hasspacher, Klaus  
PATENT ASSIGNEE(S): Sandoz Ltd.  
SOURCE: Ger. Offen., 16 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2230539	A1	19730111	DE 1972-2230539	19720622
CH 545763	A	19740215	CH 1971-9347	19710625
CH 546737	A	19740315	CH 1971-12494	19710826
NL 7208391	A	19721228	NL 1972-8391	19720620
HU 163935	P	19731128	HU 1972-SA2368	19720620
US 3688829	A	19750610	US 1972-264422	19720620
DD 99568	C	19730820	DD 1972-163907	19720622
BE 785389	A1	19721227	BE 1972-119129	19720623
FR 2143344	A1	19730202	FR 1972-22697	19720623
AU 7243904	A1	19740103	AU 1972-43904	19720626
PRIORITY APPLN. INFO.:			CH 1971-9347	19710625
			CH 1971-12494	19710826

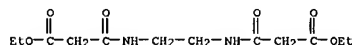
IT 40722-22-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 40722-22-3 CAPLUS  
CN Benzeneacetic acid, α,α'-(1,2-ethanediybis(iminomethylene))bi s[3,4-dimethoxy-, diethyl ester, dihydrochloride (9CI) (CA INDEX NAME)



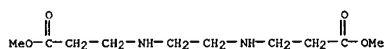
● 2 HCl

L8 ANSWER 51 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

L8 ANSWER 52 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Conversion of β-alkoxy- and β-alkylthio-β-chloroacryloyl chlorides R<sub>1</sub>YCCl:CR<sub>2</sub>COCl (R = H, alkyl, R<sub>1</sub> = alkyl and Y = O or S) with amines R<sub>2</sub>NH<sub>2</sub> yields the expected carboxamides R<sub>1</sub>YCCl:CR<sub>2</sub>CONHR<sub>2</sub>. Phenylhydrazine reacts with β-alkoxy-β-chloroacryloyl chlorides to give a mixture of 3-alkoxy-1-phenyl-2-pyrazolin-5-ones and 5-alkoxy-1-phenyl-4-pyrazolin-3-ones.  
ACCESSION NUMBER: 1971:476679 CAPLUS  
DOCUMENT NUMBER: 75:76679  
TITLE: Pyrazolones and amides from β-alkoxy- and β-alkylthio-β-chloroacryloyl chlorides  
AUTHOR(S): Van den Bosch, G.; Bos, H. J. T.; Arens, J. F.  
CORPORATE SOURCE: Lab. Org. Chem., Univ. Utrecht, Utrecht, Neth.  
SOURCE: Recueil des Travaux Chimiques des Pays-Bas (1971), 90(6), 601-10  
CODEN: RTCPA3; ISSN: 0165-0513  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 13001-79-1P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 13001-79-1 CAPLUS  
CN Propanoic acid, 3,3'-(1,2-ethanediyldiimino)bis[3-oxo-, diethyl ester (9CI) (CA INDEX NAME)



L8 ANSWER 53 OF 64 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB Derivs. of HO2CCH2NH(CH2)2NHCH2CO2H (I) and  
 HO2C(CH2)2NH(CH2)2NH(CH2)2CO2H  
 (II), none of which were tumor-inhibiting, were prepared II diamide  
 reacted  
 with CH2O to give 1,1'-ethylenebis(tetrahydro-4(1H)-pyrimidinone). I  
 diamide was prepared (4%) by hydrogenolysis of  
 N,N'-bis(carbamoylmethyl)-  
 N,N'-dibenzylethylenediamine. I and II reacted with KO2N to give  
 1,1'-ethylenedihydantoin and 1,1'-ethylenedihydouracil, resp.  
 ACCESSION NUMBER: 1971:445018 CAPLUS  
 DOCUMENT NUMBER: 75:49018  
 TITLE: Derivatives of N,N'-bis(carboxymethyl)- and  
 N,N'-bis(β-carboxyethyl)ethylenediamine  
 AUTHOR(S): Haydock, D. B.; Mulholland, T. P. C.  
 CORPORATE SOURCE: Pharm. Div., Imp. Chem. Ind. Ltd.,  
 Macclesfield/Cheshire, UK  
 SOURCE: Journal of the Chemical Society [Section] C: Organic  
 (1971), (13), 2389-95  
 CODEN: JSOORX; ISSN: 0022-4952  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 32808-28-9P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 32808-28-9 CAPLUS  
 CN β-Alanine, N,N'-1,2-ethanediylbis-, dimethyl ester, dihydrochloride  
 (9CI) (CA INDEX NAME)

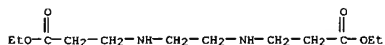


●2 HCl

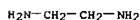
L8 ANSWER 55 OF 64 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB Polyethylene sulfide and polypropylene sulfide with improved stability  
 are prepared containing 2.5% N-substituted polyethylenimines,  
 β-propiolactone-N-  
 substituted ethylenimine copolymers, or the addition products of a  
 diamino  
 diester such as [EtO2C(CH2)2NH]2(CH2)2 with H2N(CH2)2NH2.  
 ACCESSION NUMBER: 1969:12313 CAPLUS  
 DOCUMENT NUMBER: 70:12313  
 TITLE: Stabilizers for polysulfides  
 INVENTOR(S): Weill, Julien  
 PATENT ASSIGNEE(S): Ethylene-Plastique  
 SOURCE: Fr., 7 pp.  
 CODEN: FRXXAK  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 1507325		19671229	FR	19661117
GB 1188032			GB	

IT 28504-12-3  
 RL: USES (Uses)  
 (stabilizers, for polysulfide)  
 RN 28504-12-3 CAPLUS  
 CN β-Alanine, N,N'-ethylenedi-, diethyl ester, polymer with  
 ethylenediamine (8CI) (CA INDEX NAME)  
 CM 1  
 CRN 19294-22-5  
 CMF C12 H24 N2 O4

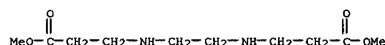


CM 2  
 CRN 107-15-3  
 CMF C2 H8 N2

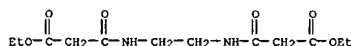


RL: USES (Uses)  
 (stabilizers, for polysulfides)

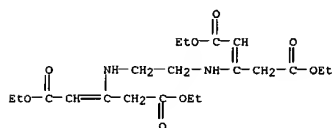
L8 ANSWER 54 OF 64 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB α-Aminoalkylamino acid esters with the formula  
 H2N(CH2)nNHCH2CH2CO2Me, where n is 2-6, were synthesized from diamines  
 and  
 Me acrylate. Polycondensation of the products at room temperature gave  
 crystalline  
 oligo(amide amines), while amorphous polymers were obtained by heating  
 the  
 monomers at elevated temps. Polymers with higher mol. wts. were formed  
 by  
 thermal polycondensation of the crystalline oligo(amide amines) under  
 reduced  
 pressure. The conversion from crystalline to amorphous polymers is  
 attributed  
 to β-fission of the chain by a reversible Michael reaction.  
 Polycondensation kinetics are discussed.  
 ACCESSION NUMBER: 1970:477689 CAPLUS  
 DOCUMENT NUMBER: 73:77689  
 TITLE: Polycondensation of α-aminoalkylamino acid  
 esters  
 AUTHOR(S): Asahara, Tomohiko  
 CORPORATE SOURCE: Basic Res. Lab., Toray Ind., Inc., Kamakura, Japan  
 SOURCE: Makromolekulare Chemie (1970), 136, 211-19  
 CODEN: MACEAK; ISSN: 0025-116X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 23939-28-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 23939-28-8 CAPLUS  
 CN β-Alanine, N,N'-1,2-ethanediylbis-, dimethyl ester (9CI) (CA INDEX  
 NAME)



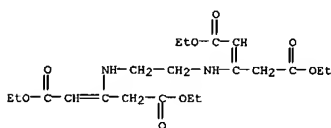
L8 ANSWER 56 OF 64 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB cf. CA 63, 16389a; U.S. 3,030,359; CA 57, 11024g. (Cl3C)2CO (0.1 mole)  
 and 0.15 mol. EtOC.tpbond.CH (I) mixed at room temperature and the  
 mixture kept  
 24 hrs. and distilled gave 70% (Cl3C)2C:CHCO2Et, b0.33 122-4°, n  
 1.5330 (all n20D), m. 51.8-2.5° (petr. ether); Cl3CCHO and I kept 5  
 days gave 17% Cl3CCH:CHCO2Et, b10 .apprx.100°, n 1.482. To COCl2  
 in Et2O (.apprx.2M) at -20 to 0° was added an equimolar amount of  
 RC.tpbond.CH and the whole kept 60 hrs. at 10-20° and distilled to  
 give the following RC(COCl):CClOR' (R, R', b.p./mm., n, and % yield  
 given): H, Me, 55-57°/0.05, 1.5262, 77; H, Et (II),  
 55-58°/0.12, 1.5143, 74; H, Pr, 70-3°/0.03, 1.5074, 66; Me,  
 Et, 42.5-44.5°/0.003, 1.5049, 91; Et, Et, 44.5-5.5°/0.004,  
 1.4981, 82; Pr, Et, 55-8°/0.02, 1.4920, 82. To 0.048 mole  
 (H2NCH2)2 in 60 ml. dry Et2O was added dropwise at 20-30° 0.048  
 mole II, the whole stirred 1 hr., and the solid filtered off and washed  
 with H2O to give 57% (EtOCCl:CHCONHCH2)2 (III), m. 153-4° (Me2CO).  
 III (0.15 mole) in 100 ml. absolute EtOH was saturated with HCl at 10-20°  
 and the whole kept 60 hrs. and evaporated to give 59%  
 (EtO2CCH2CONHCH2)2, m.  
 127.5-8.5° (Me2CO). To 0.2 mole I in 150 ml. CH2Cl2 at -70°  
 was added 0.1 mole SCl2; a violent reaction occurred. The whole kept 2  
 hrs. at -70°, concentrated, and the residue distilled gave  
 EtOCCl:CHSCH:CClOEt (IV), b0.03 90-6°. IV in absolute EtOH and HCl as  
 above gave 86% (EtO2CCH2)2S, b0.006 72-6°, n 1.4668. The reaction  
 mechanisms are discussed and the ir, N.M.R., and mass spectral data of  
 the  
 compds. are presented.  
 ACCESSION NUMBER: 1966:456411 CAPLUS  
 DOCUMENT NUMBER: 65:56411  
 ORIGINAL REFERENCE NO.: 65:10485b-d  
 TITLE: Chemistry of acetylenic ethers. LXXXI. Synthesis of  
 β-alkoxy-β-chloroacrylic chlorides by  
 addition of phosgene to 1-alkynyl ethers  
 van den Bosch, G.; Bos, H. J. T.; Arens, J. F.  
 Recueil des Travaux Chimiques des Pays-Bas (1966),  
 85(6), 567-79  
 CODEN: RTCPA3; ISSN: 0165-0513  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 65:56411  
 IT 13001-79-1, Malonic acid, N,N'-ethylenedi-, diethyl ester  
 (preparation of)  
 RN 13001-79-1 CAPLUS  
 CN Propanoic acid, 3,3'-(1,2-ethanediyl-diimino)bis[3-oxo-, diethyl ester  
 (9CI) (CA INDEX NAME)



L8 ANSWER 57 OF 64 CAPLUS COPYRIGHT 2004 ACS ON STN  
 GI For diagram(s), see printed CA Issue.  
 AB Condensation of ethylenediamine with  $\beta$ -oxo esters in ethanol at 60° gave I and II (R = Me, CO<sub>2</sub>Et, CH<sub>2</sub>CO<sub>2</sub>Et). The addnl. H-bond stabilization in the enamine II (R = CH<sub>2</sub>CO<sub>2</sub>Et) favors the formation of this tautomer rather than I.  
 ACCESSION NUMBER: 1965:90241 CAPLUS  
 DOCUMENT NUMBER: 62:90241  
 ORIGINAL REFERENCE NO.: 62:16045a-b  
 TITLE: The reaction of ethylenediamine with  $\beta$ -oxo esters. Evidence for ketimine-enamine tautomerism  
 AUTHOR(S): Hay, R. W.; Caughley, B. P.  
 CORPORATE SOURCE: Victoria Univ., Wellington  
 SOURCE: Chemical Communications (London) (1965), (4), 58  
 CODEN: CCOMA8; ISSN: 0009-241X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 1695-81-4, Glutaconic acid, 3,3'-(ethylenediimino)di-, tetraethyl ester  
 (preparation of)  
 RN 1695-81-4 CAPLUS  
 CN Glutaconic acid, 3,3'-(ethylenediimino)di-, tetraethyl ester (7CI, 8CI) (CA INDEX NAME)



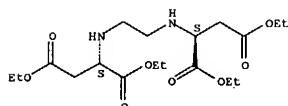
L8 ANSWER 58 OF 64 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB Methyl and ethyl formate were irradiated, at room temperature in an atmospheric of N<sub>2</sub>, with a 450 w. high pressure Hg arc lamp, for 15 hrs. and 25 hrs., resp. The photolysis of methyl formate yielded HCHO, Me<sub>2</sub>CO, MeOH, acetonylacetone and gaseous products such as CO, CO<sub>2</sub>, CH<sub>4</sub>, and C<sub>6</sub>H<sub>6</sub>. Ethyl formate yielded AcH, Me<sub>2</sub>CO, EtOH, methyl ethyl ketone and ethyl ether as well as the above gaseous products together with C<sub>2</sub>H<sub>4</sub>. The results suggested that there are 3 main primary steps: HCO<sub>2</sub>R +  $\lambda\nu \rightarrow$  OHC\* + \*OR;  $\rightarrow$  H\* + \*CO<sub>2</sub>R; + HCOO\* + \*R.  
 ACCESSION NUMBER: 1965:90240 CAPLUS  
 DOCUMENT NUMBER: 62:90240  
 ORIGINAL REFERENCE NO.: 62:16044h,16045a  
 TITLE: Photolyses of alkyl esters  
 AUTHOR(S): Tominaga, Tamotsu; Odaira, Yoshinobu; Tsutsumi, Shigeru  
 SOURCE: Technology Reports of the Osaka University (1964), 14(635), 973-6  
 CODEN: TROUAI; ISSN: 0030-6177  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 1695-81-4, Glutaconic acid, 3,3'-(ethylenediimino)di-, tetraethyl ester  
 (preparation of)  
 RN 1695-81-4 CAPLUS  
 CN Glutaconic acid, 3,3'-(ethylenediimino)di-, tetraethyl ester (7CI, 8CI) (CA INDEX NAME)



L8 ANSWER 59 OF 64 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB Salts of unsatd. di- and tricarboxylic acids were treated with diamines to give bisadducts. Thus, 400 g. maleic anhydride (I) was added to 400 ml. H<sub>2</sub>O. After standing 1 hr., 700 g. 50% aqueous NaOH was added at 75-85° and then 170 g. 70% (CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub> (II). The mixture was heated at reflux 48 hrs., cooled, and acidified with 680 ml. concentrated HCl to give 92.2% [CH<sub>2</sub>NHCH(CH<sub>2</sub>CO<sub>2</sub>H)CO<sub>2</sub>H]<sub>2</sub>, (III), m. 220-2°. The di- and pentahydrate of III were also prepared. In a similar manner were prepared analogs of III (acid or anhydride, base, and amine used, yield, and m.p. of product given): fumaric acid, NaOH, II, 75% III, 220-2°; I, NaOH, HN(CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub> (IV), 57%, 208-10°; I, NaOH, H<sub>2</sub>N(CH<sub>2</sub>)<sub>6</sub>NH<sub>2</sub> (V), 58%, --; I, NaOH, HOCH(CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub>, 90%, --; aconitic acid (VI), N(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>3</sub> (VII), IV, 21% NH[CH<sub>2</sub>CH<sub>2</sub>NHC(CH<sub>2</sub>CO<sub>2</sub>H)<sub>2</sub>CO<sub>2</sub>H]<sub>2</sub> (VIII) or isomer, decomposed 230°; VI, VII, V, 63% 32n+ salt, --; I, VII, CH<sub>2</sub>(C<sub>6</sub>H<sub>4</sub>NH<sub>2</sub>-4)<sub>2</sub> (IX), 70% di-Zn+ salt, --; itaconic acid, VII, IX, 21% 1,1'-methylene-di-p-phenylenebis[2-pyrrolidone-4-carboxylic acid], 200-10°; I, NaOH, 1,3-C<sub>6</sub>H<sub>4</sub>(CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub>, 99% 2Ca++ salt, free acid m. 155°. Reaction of 29.2 g. III with 53 g. oleylamine at 160° 1 hr. gave 75 g. of a di-N-oleylamide. Treatment of 120 g. urea with 146 g. III at 130-40° 2 hrs. gave 244 g. of a glassy polymer. The following derivs. of III were also prepared: H<sub>2</sub>SO<sub>4</sub> and di-HCl salts; tetraethyl ester (99%); di-Na+ salt (32%); di-NH<sub>4</sub>+ salt (65.6%); Ba++ salt (93.5%); Pb++, Cu++, and Mn++ salts. These materials are useful for removing rust and oxide coatings from metals.  
 ACCESSION NUMBER: 1965:43538 CAPLUS  
 DOCUMENT NUMBER: 62:43538  
 ORIGINAL REFERENCE NO.: 62:7643f-h  
 TITLE: Bisadducts of diamines and unsaturated acids  
 INVENTOR(S): Kezerian, Charles; Ramsey, William M.  
 PATENT ASSIGNEE(S): Stauffer Chemical Co.  
 SOURCE: 13 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

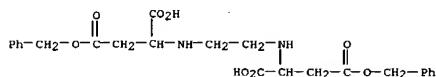
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3158635		19641124	US	19590318
IT 1115-44-2		Aspartic acid, N,N'-ethylenedi-, tetraethyl ester (preparation of)		
RN 1115-44-2		CAPLUS		
CN L-Aspartic acid, N,N'-1,2-ethanediyldi-, tetraethyl ester (9CI) (CA INDEX NAME)				

Absolute stereochemistry.



L8 ANSWER 60 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB A solution of 12 g. MeCH(CO<sub>2</sub>H)<sub>2</sub> and 4.3 g. anhydrous MeCH(OH)NH<sub>2</sub> in 60 ml. EtOH was refluxed 1 hr. at 40°, 2 hrs. each at 60, 80, and 100° and 2.5 hrs. each at 120 and 130° to yield a resinous product which was dissolved in H<sub>2</sub>O. The resulting solution made alkaline with NH<sub>3</sub>, purified with activated C, evaporated to dryness, and the residue recrystd from EtOHMe<sub>2</sub>CO yielded 34% EtCO<sub>2</sub>H, 5% tiglic acid, and 12-13% of a mixture of DL-β-amino-α-methylbutyric acid (I), m. 225-7°, and its diastereoisomer (II), m. 214-15°, which were separated by repeated recrystn. The resp. N-benzoyl derivs., m. 159-61° and 129-30°, were easily separated from the benzoylated mixture. Similarly, from MeCH(CO<sub>2</sub>H)CO<sub>2</sub>Et were prepared the Et esters of II and I which were separated as the picrates, m. 135-6° and 116-18°, resp.

ACCESSION NUMBER: 1963:481940 CAPLUS  
 DOCUMENT NUMBER: 59:81940  
 ORIGINAL REFERENCE NO.: 59:15173c-e  
 TITLE: Synthesis of the diastereoisomeric DL-β-amino-α-methylbutyric acids by the Rodinov reaction  
 AUTHOR(S): Kurtev, P.; Pozharliev, I.  
 SOURCE: Doklady Bolgarskoi Akademii Nauk (1963), 16(1), 65-8  
 CODEN: DBANAD; ISSN: 0366-8601  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 96668-45-0, Aspartic acid, N,N'-ethylenedi-, 4,4'-dibenzyl ester (preparation of)  
 RN 96668-45-0 CAPLUS  
 CN Aspartic acid, N,N'-ethylenedi-, 4,4'-dibenzyl ester (7CI) (CA INDEX NAME)



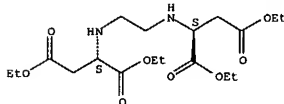
L8 ANSWER 61 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 GI For diagram(s), see printed CA Issue.  
 AB The title compds. can be used as chelating agents. Maleic anhydride (400 g.) is added to 400 ml. H<sub>2</sub>O, the mixture is kept for 1 hr., neutralized with 700 g. 50% NaOH at 75-85°, and 170 g. 70% ethylenediamine added. The mixture is digested at >95°, refluxed 48 hrs., and the pH is adjusted to 2.0 with 680 ml. concentrated HCl to give 540 g. ethylenediamine-N,N'-disuccinic acid (I), m. 220-2°, 92.2% yield. Similarly prepared are I.2HCl; diethylenetriamine-N,N'-disuccinic acid, m. 208-10°; tetraethylenepentamine-N,N'-disuccinic acid; hexamethylenediamine-N,N'-disuccinic acid; HN(CH<sub>2</sub>CH<sub>2</sub>NHC(CO<sub>2</sub>H)(CH<sub>2</sub>CO<sub>2</sub>H)<sub>2</sub> or the β-isomer, m. approx. 230° (decomposition); p,p'-methylene dianiline-N,N'-disuccinic acid; diphenylmethane-p,p'-bis[(2-pyrrolidone-4-carboxylic acid)] (IIa), m. 200-10°; ethylenediamine-N,N'-bis(2-hydroxyethyl)-N,N'-disuccinic acid (II), m. 168.5-69° (decomposition); tetrasodium ethylenediamine-N,N'-bis(2-hydroxyethyl)-N,N'-disuccinate-10H<sub>2</sub>O; dibarium salt of II; Pb dihydrogen salt of II; Zn dihydrogen salt of II; cupric dihydrogen salt of II; ferrie dihydrogen salt of II; diethylenetriamine-N,N',N''-tris(2-hydroxyethyl)-N,N''-disuccinic acid; tetraethylenepentamine-N,N<sub>1</sub>N<sub>2</sub>N<sub>3</sub>N<sub>4</sub>-pentakis(2-hydroxyethyl)-N,N<sub>4</sub>-disuccinic acid (III); III.5HCl; ethylenediamine-N,N'-bis(2,3-dihydroxypropane)-N,N'-disuccinic acid (IV); tetrasodium salt of IV; dibarium salt of IV; hexamethylenediamine-N,N'-bis(2,3-dihydroxypropane)-N,N'-disuccinic acid; ethylenediamine-N,N'-bis(3-hydroxypropane)-N,N'-disuccinic acid; ethylenediamine-N,N'-bis(tetrahydrofuran-2-yl)-N,N'-disuccinic acid (V); di-zinc salt of V; ethylenediamine-N,N'-bis(2-hydroxy-2-phenylethyl)-N,N'-disuccinic acid; ethylenediamine-N,N'-bis(3-phenoxy-2-hydroxypropane)-N,N'-disuccinic acid; ethylenediamine-N,N'-disuccinic acid)-N,N'-diacetic acid; octasodium ethylenediamine-N,N'-bis(methanephosphonate)-N,N'-disuccinate; tetrabarium ethylenediamine-N,N'-bis(methanephosphonate)-N,N'-disuccinate; and m-dixylyl-α,α'-diamine-N,N'-diacetic acid-N,N'-disuccinic acid.

ACCESSION NUMBER: 1963:415382 CAPLUS  
 DOCUMENT NUMBER: 59:15382  
 ORIGINAL REFERENCE NO.: 59:2724h, 2725a-d  
 TITLE: Polyalkylenepolyaminealkylenepolycarboxylic acids  
 INVENTOR(S): Ramsey, William M.; Kerzerian, Charles  
 PATENT ASSIGNEE(S): Victor Chemical Works  
 SOURCE: 14 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	US 3077487		19630212	US	19590617
IT	1115-44-2		Aspartic acid, N,N'-ethylenedi-, tetraethyl ester (preparation of)		
RN	1115-44-2		CAPLUS		
CN	I-Aspartic acid, N,N'-1,2-ethanediyldis-, tetraethyl ester (9CI)		(CA INDEX NAME)		

Absolute stereochemistry.

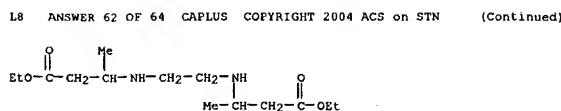
L8 ANSWER 61 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L8 ANSWER 62 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB The addition of primary aliphatic amines to Et crotonate (I) and to the 3-crotonate ester (II) of 1,2:5,6-di-O-isopropylidene-α-D-glucopyranose (III) occurred by γ-addition to the double bond, but the 3-(2-butenyl) ether (IV) or 3-allyl ether (V) of III did not react likewise. I also underwent deesterification and amide formation on aminolysis. Aminolysis of II with amino derivs. of sugars (cf. preceding abstract) gave adducts analogous to those obtained with simple amines.

The adducts from II were readily hydrolyzed to give III and the corresponding acid derivative. The significance of these observations in cross-linking reactions applicable to cellulose was discussed. I (100 g.) in 100 ml. MeOH was added during 5 hrs. to a refluxing solution of 60 g. ethylenediamine (VI) in 200 ml. MeOH under N. After 24 hrs. at reflux the solution was evaporated, and the residue sublimed repeatedly to give 17 g. 3-[(2-aminoethyl)amino]butyric lactam (VII), m. 113-14° (EtOAc); picrate m. 242°; acetate m. 100-1°. Hydrolysis of 2 g. VII with 10% HCl 4 hrs. under reflux gave 2 g. 3-[(2-aminoethyl)amino]butyric acid di-HCl salt (VIII), m. 150-1°. The Na salt of VIII, which with EtOH-HCl gave VIII Et ester (IX), m. 111° (C<sub>6</sub>H<sub>6</sub>-EtOH). Reaction of 30 g. I with 8 g. VI in 100 ml. EtOH 5.5 days at 4° gave, after concentration and heating with H<sub>2</sub>O, 5.5 g. N,N'-ethylenediis(3-aminobutyric acid) (X), m. 216-18° (aqueous EtOH), dipicrate m. 205-6°, di-Et ester di-HCl m. 194-5°. X Cu salt was prepared I (18.5 g.) was kept 6 days at 4° with 18.5 g. mono-N-acetyl derivative of VI and 70 ml. EtOH, a small amount of solid m. 293° (decomposition) was filtered off, the solution was concentrated, H<sub>2</sub>O was added, excess I was extracted with Et<sub>2</sub>O, and the aqueous phase was concentrated giving 17.5 g. 3-[(2-acetamido-ethyl)amino]butyric acid (XI), m. 158-60° (EtOH-Et<sub>2</sub>O). Saponification of 2 g. XI with boiling aqueous KOH, followed by the treatment with HCl and EtOH gave 0.9 g. VIII, m. 151-2°, and 1.4 g. IX, m. 111-12°. Treatment of crotonic acid with 2-aminoethanol (XII) in EtOH 18 hrs. at room temperature gave 69% (2-hydroxyethyl)ammonium crotonate (XIII), m. 85-90° (Me<sub>2</sub>CO-petr. ether), which reacted with acid KMnO<sub>4</sub> at 23° (time in hrs., moles O consumed given): 0.25, 4.80; 0.5, 4.85; 1, 5.35; 5, 5.88. XIII rearranged on standing or on heating to 100° giving 3-[(2-hydroxyethyl)amino]butyric acid (XIV), m. 181.5-3.5° (EtOH-petr. ether). In contrast ethylenediammonium crotonate, m. 121.5-2.5 was stable on storage or at 100°. The Na salt of III was treated with crotonyl chloride (or III was treated with crotonic anhydride and C<sub>5</sub>H<sub>5</sub>N) to give II, m. 65.5-7.0° (after distillation), [α]<sub>D</sub><sup>20</sup> -48.4° (c 4.7, CHCl<sub>3</sub>). III (1 g.), 0.4 g. NaOH, and 5 ml. dioxane were stirred at 45° during the addition of 4 ml. 2-butenyl bromide, stirring was continued 4.5 hrs. at 50-60°, H<sub>2</sub>O was added, the product was extracted with CHCl<sub>3</sub>, the extract was washed with H<sub>2</sub>O, dried, and evaporated giving 1.2 g. IV, b<sub>0.02</sub> 120° (bath), n<sub>D</sub><sup>20</sup> 1.4602, [α]<sub>D</sub><sup>20</sup> -18.8° (c 1.3, CHCl<sub>3</sub>). V, b<sub>0.005</sub> 113° (bath), n<sub>D</sub><sup>20</sup> 1.4570, [α]<sub>D</sub><sup>20</sup> -12.7° (c 2.4, CHCl<sub>3</sub>). was prepared similarly. II (3.691 g.) in 75 ml. Et<sub>2</sub>O was kept 70 hrs. at room temperature with 0.675 ml. XII to give 4.458 g. III 3-[(2-hydroxyethyl)amino]butyrate (XV), b<sub>0.005</sub> 140°. Treatment of XV with p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>Cl in C<sub>5</sub>H<sub>5</sub>N gave sirupy XV bis(p-toluenesulfonate). XV crystallized on standing; extraction with petr. ether

L8 ANSWER 62 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
gave a quant. yield of III, the residue gave 92% XIV, m. 178-80°.  
II (3.155 g.), 0.32 ml. VI, and 75 ml. EtOH were kept 2.75 days at room temp., the product was evapd. and a 0.86 g. sample distd. to give 0.39 g. III and 0.258 g. bis[1,2:3,6-di-O-isopropylidene-α-D-glucosufuranose] 3,3'-[N,N'-ethylenediis(3-aminobutylate)] (XVI), b.p. 0.155-70° (bath), n<sub>D</sub>20 1.468. XVI hydrolyzed on storage; on heating with H<sub>2</sub>O it gave III and X. II (0.206 g.) and 0.137 g. 6-amino-6-deoxy-1,2-O-isopropylidene-α-D-glucosufuranose in EtOH underwent addn. during 8.5 days giving 0.13 g. amorphous unidentified product and 0.267 g. 3-ester (XVII) of III and 6-[(2-carboxy-1-methylethyl)amino]-6-deoxy-1,2-O-isopropylidene-α-D-glucosufuranose (XVIII), b.p. 0.005 170°.  
XVII hydrolyzed on storage; on stirring with H<sub>2</sub>O it gave XVIII, m. 187-9° (EtOH-Et<sub>2</sub>O). Condensation of 0.42 g. II with 0.387 g. III 3-(2-aminoethyl) ether gave 0.253 g. 3-ester of III and 3-O-[(2-[(2-carboxy-1-methyl-ethyl)amino] ethyl) - 1,2: 5,6 - di - O - isopropylidene - α - D-glucosufuranose, b.p. 0.005 175°, n<sub>D</sub>20 1.468, which on treatment with hot H<sub>2</sub>O gave III. Similarly, condensation of 0.919 g. II with 0.853 g. 6-O-(2-aminoethyl)-1,2:3,4-di-O-isopropylidene-α-D-galactopyranose gave 0.296 g. 3-ester of II and 6 - O - [(2-carboxy-1-methylethyl)amino] ethyl - 1,2:3,4-di-O-isopropylidene-α-D-galactopyranose (XIX), b.p. 0.005 175-90° (bath), n<sub>D</sub>20 1.4700, [α]<sub>D</sub>20D -68.6° (c 0.79, CHCl<sub>3</sub>), which on treatment with H<sub>2</sub>O gave the free acid XIX, m. 156.0-7.5° (EtOH-Et<sub>2</sub>O-petr. ether). Addn. of 2.99 g. 3-(3-aminopropyl) ether of III to 3.1 g. II gave 0.477 g. 3-ester of III and 3-[3-[(2-carboxy-1-methylethyl)amino]-propyl] - 1,2: 5,6 - di - O - isopropylidene - α - D - glucosufuranose, b.p. 0.005 165° (bath), n<sub>D</sub>20 1.467, [α]<sub>D</sub> -21.2°, which on storage gave a sirup contg. III. Addn. of 4.996 g. 6-O-(3-amino-propyl)-1,2: 3,4-di-O-isopropylidene-α-D-galactopyranose to 5.106 g. II gave the 3-ester of III and 6-O-[3-[(2-carboxy-1-methylethyl)amino] propyl]-1,2: 3,4-di - O - isopropylidene - α-D-galactopyranose (XX), b.p. 0.005 135°, n<sub>D</sub>20 1.4670, [α]<sub>D</sub>23D -60.8° (c 1, CHCl<sub>3</sub>), which on storage gave the free acid XX, m. 190.0-1.5° (petr. ether), [α]<sub>D</sub>23D -64° (c 1, CHCl<sub>3</sub>), together with III.  
ACCESSION NUMBER: 1962:60810 CAPLUS  
DOCUMENT NUMBER: 56:60810  
ORIGINAL REFERENCE NO.: 56:11688c-i,11689a-e  
TITLE: Cross-linking of cellulose and its derivatives. III. The addition of amines to crotonyl esters  
AUTHOR(S): Corbett, W. M.; McKay, J. E.  
CORPORATE SOURCE: Brit. Rayon Research Assocn., Manchester, UK  
SOURCE: Journal of the Chemical Society, Abstracts (1961) 2930-5  
CODEN: JCSAAZ; ISSN: 0590-9791  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
OTHER SOURCE(S): CASREACT 56:60810  
IT 93807-29-5, Butyric acid, 3,3'-(ethylenediimino)di-, diethyl ester, dihydrochloride (preparation of)  
RN 93807-29-5 CAPLUS  
CN Butyric acid, 3,3'-(ethylenediimino)di-, diethyl ester, dihydrochloride (7CI) (CA INDEX NAME)

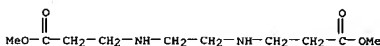


● 2 HCl

L8 ANSWER 63 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Some N,N-disubstituted 3-amino-2,4,6-triiodobenzamides were prepared from 3,2,4,6-XI3C6HCOCl (X = NH<sub>2</sub> or NSO) and an ester of an N-substituted amino carboxylic acid. In some cases, NEt<sub>3</sub> was included in the reaction mixture  
These amides were x-ray contrast agents, for oral or intravenous administration, and showed the gall-bladder. SOCl<sub>2</sub> (250 ml.) was added to 110 g. 3-amino-2,4,6-triiodobenzoic acid (I), and the stirred mixture heated 95 min. at 50-55°. Removal of SOCl<sub>2</sub> at 400 mm. left an almost quant. yield of 2,4,6,3-13(OSN)C<sub>6</sub>HCOCl II), m. 107-9°. To 13.1 g. II in 13 ml. dioxane was added carefully 11 g. MeNHCH<sub>2</sub>CO<sub>2</sub>Et. The mixture was refluxed 5 min. and, after addition of 3 ml. H<sub>2</sub>O, 2 min. more, before being poured into 125 ml. 0.8N HCl (SO<sub>2</sub> evolved). The washed (aqueous Na<sub>2</sub>CO<sub>3</sub>) Et<sub>2</sub>O extract yielded 13.3 g. YNMeCH<sub>2</sub>CO<sub>2</sub>Et (III) [Y = 2,4,6,3-13(H<sub>2</sub>N)C<sub>6</sub>HCO].  
A mixture of 12.6 g. III and 25 ml. 0.86N methanolic NaOH was boiled briefly and poured into Et<sub>2</sub>O to precipitate 83% yield YNMeCH<sub>2</sub>CO<sub>2</sub>Na. A solution of II (from 110 g. I) in 300 ml. Et<sub>2</sub>O was washed at 0° with aqueous NaCl before the SO group was displaced by somewhat more than the calculated amount of 6.5% aqueous NaOH. The Et<sub>2</sub>O solution, washed by aqueous NaCl and ice, was dried by NaCl, then KOH, and concentrated to crystallization to give 93% YCl (IV), m. 93.5-5°. IV did not react with itself or boiling N aqueous NaOH. PhNHCH<sub>2</sub>CO<sub>2</sub>Et (14.4 g.) was converted by IV into 17.7 g. YNPhCH<sub>2</sub>CO<sub>2</sub>H, m. 128°, and its Na salt: PhNHCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me into YNPhCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me (74% yield, m. 156-7°) and the free acid (m. 133-4.5°); m-HO<sub>2</sub>CC<sub>6</sub>H<sub>4</sub>NHCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me (from m-H<sub>2</sub>NC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H and CH<sub>2</sub>:CHCO<sub>2</sub>Me) into m-HO<sub>2</sub>CC<sub>6</sub>H<sub>4</sub>NYCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H (52%, m. 140°); HOCH<sub>2</sub>CH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me into HOCH<sub>2</sub>CH<sub>2</sub>NYCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me (79%) and its Na salt (decomposing 220°) and the free acid (64% over-all yield, m. 1015°); EtNHCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me into YNEtCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H (57%, m. 96-104°); BuNHCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me into YNBuCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H (71%, m. 78-86°); BuNHCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Et into YNBuCH<sub>2</sub>CO<sub>2</sub>H (84%, m. 81-6°); (CH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me)<sub>2</sub> [from 2 moles CH<sub>2</sub>:CHCO<sub>2</sub>Me and 1 mole (CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub>] into (CH<sub>2</sub>NYCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me)<sub>2</sub> (95%) and hence the free acid (69% over-all yield, m. unsharply 180°); [(CH<sub>2</sub>)<sub>3</sub>NHCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me]<sub>2</sub> into [(CH<sub>2</sub>)<sub>3</sub>NYCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H]<sub>2</sub> (68%, m. from 130°); [(CH<sub>2</sub>)<sub>3</sub>NHCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me]<sub>2</sub> into [(CH<sub>2</sub>)<sub>3</sub>NYCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H]<sub>2</sub> (48%, m. from 130°).  
ACCESSION NUMBER: 1961:131121 CAPLUS  
DOCUMENT NUMBER: 55:131121  
ORIGINAL REFERENCE NO.: 55:24683f-i,24684a  
TITLE: Derivatives of 3-amino-2,4,6-triiodobenzamide for use as x-ray contrast agents  
PATENT ASSIGNEE(S): Osterreichische Stickstoffwerke Akt.-Ges.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 870321		19610614	GB	
US 3051745		1962	US	

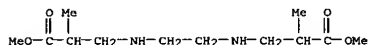
L8 ANSWER 63 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
IT 23939-28-8, β-Alanine, N,N'-ethylenedi-, dimethyl ester (preparation of)  
RN 23939-28-8 CAPLUS  
CN β-Alanine, N,N'-1,2-ethanedilylbis-, dimethyl ester (9CI) (CA INDEX NAME)





L8 ANSWER 64 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Adding (1-1.5 hrs.) 6 moles CH<sub>2</sub>:CMeCO<sub>2</sub>Et (I) to 1 mole 95-100% (CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub> (II) at 30-40° with stirring, keeping the mixture 20-4 hrs. at 20°, and distilling it yield 62% Me 3-(2-aminoethylamino)-2-methylpropanoate (III), b<sub>2</sub> 88° (di-HCl salt, m. 139-41°). With a 3:1 mole ratio of I and II, 55 and 61% III, with a 1:1:1 ratio, 47% III and 24% N,N'-bis(2-methoxycarbonyl-2-methylethyl)ethylenediamine (IV), b<sub>0</sub> 125° (di-HCl salt, m. 149-51°), and with a 1:1 ratio, 37-44% III and 28% IV are obtained. Treating IV with PhSO<sub>2</sub>Cl gives the N,N'-dibenzenesulfonyl derivative, m. 140-2°. Heating 3 g. III in 15 cc. 12% HCl 3 hrs. on a steam bath and evaporating the solution in vacuo yield 46% 2-(2-aminoethylamino)-2-methylpropanoic acid-2HCl, needles, m. 179-81° (N,N'-di-Bz derivative, needles, m. 122-4°). Keeping 52 g. III 2 months at 20-5° and adding ice-H<sub>2</sub>O give 4% 1,5,-8,12-tetraza-3,10-dimethyl-2,9-cyclotetradecanedione (V), needles, m. 260-2° (decomposition) [NO derivative, prepared by treating the solution of V in HCl with NaNO<sub>2</sub>, m. 255-63° (decomposition); Bz derivative m. 296-8° (decomposition)]. Adding (1.5 hrs.) 10.6 g. CH<sub>2</sub>:CHCN to 36 g. II and keeping the mixture overnight at 20° yield 59% 2-(2-aminoethylamino)-propanenitrile (VI), b<sub>0</sub> 124-7° (di-HCl salt, needles, m. 129-31°; N,N'-di-Bz derivative m. 96-8°). Adding 1 g. VI to 10 cc. absolute EtOH saturated with HCl, adding 0.2 cc. H<sub>2</sub>O, keeping the mixture overnight, refluxing it 5 hrs., and cooling the hot filtered solution give 38% Et 3-(2-aminoethylamino)-propanoate-2HCl, plates, m. 152-4°, which, refluxed 1.5 hrs. in 10 cc. dilute HCl, yields 76% free acid-2HCl, plates, m. 153-5° (N,N'-di-Bz derivative, needles, m. 149-51°).  
 ACCESSION NUMBER: 1957:90393 CAPLUS  
 DOCUMENT NUMBER: 51:90393  
 ORIGINAL REFERENCE NO.: 51:163041,16305a-c  
 TITLE: Addition of ethylenediamine to methyl methacrylate and to acrylonitrile. Reactions of the adducts  
 AUTHOR(S): Dickerman, S. Carlton; Simon, Julius  
 CORPORATE SOURCE: New York Univ., New York, NY  
 SOURCE: Journal of Organic Chemistry (1957), 22, 259-61  
 CODEN: JOCEAH; ISSN: 0022-3263  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 IT 100385-22-6, β-Alanine, N,N'-ethylenebis[2-methyl-, dimethyl ester (preparation of)]  
 RN 100385-22-6 CAPLUS  
 CN β-Alanine, N,N'-ethylenebis[2-methyl-, dimethyl ester (6CI) (CA INDEX NAME)]

L8 ANSWER 64 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



=> d 18 1-49 abs ibib hitstr

L8 ANSWER 1 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
AB R5CH2CH2NHCR1R2CR3R4NHCH2CH2R6 [R1-R4 = H, alkyl, aryl, aralkyl; R1-R4 = atoms to form a C5-8 cycloalkyl ring; R5, R6 = CO2R7, CONR8R9, cyano, PO(OR10)2; R7-R10 = alkyl, aryl, aralkyl; NR8R9 = cyclic amino; stereogenic atoms may be R or S; with the exception of meso compds.], were prepared Thus, (1S,2S)-diphenylethylenediamine in ethanol was treated with acrylonitrile and the mixture was stirred 72 h at room temperature to give (1S,2S)-bis[N-(2-cyanoethyl)amino]-1,2-diphenylethane in 99% purity.

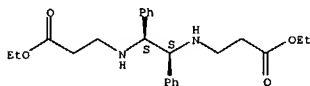
This was used with Et2Zn and polymethylhydrosiloxane for asym. reduction of propiophenone, isobutyrophenone, 2-methylacetophenone, and 2-bromoacetophenone.

ACCESSION NUMBER: 2004:157496 CAPLUS  
DOCUMENT NUMBER: 140:217374  
TITLE: Preparation of optically active 1,2-diaminoalkanes and their use in catalytic processes  
INVENTOR(S): Koecher, Juergen  
PATENT ASSIGNEE(S): Bayer Chemicals AG, Germany  
SOURCE: Eur. Pat. Appl., 16 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1391448	A1	20040225	EP 2003-18220	20030811
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10238114	A1	20040304	DE 2002-10238114	20020821
US 2004044238	A1	20040304	US 2003-643855	20030819
PRIORITY APPLN. INFO.:			DE 2002-10238114	A 20020821

OTHER SOURCE(S): CASREACT 140:217374; MARPAT 140:217374  
IT 663931-96-2P 663931-97-3P 663931-98-4P  
663931-99-5P  
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(preparation of optically active 1,2-diaminoalkanes and their use in catalytic processes)  
RN 663931-96-2 CAPLUS  
CN β-Alanine, N,N'-[(1S,2S)-1,2-diphenyl-1,2-ethanediy]bis-, diethyl ester (9CI) (CA INDEX NAME)

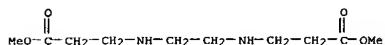
Absolute stereochemistry.



RN 663931-97-3 CAPLUS

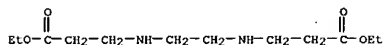
L8 ANSWER 2 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Depending on the ester alkyl group, the reaction of O,O-dialkyl ethylenediamine-N,N'-di-3-propanoate ligands (R2eddp) with K2PtCl6 afforded trans-dichloro(ethylenediamine-N,N'-di-3-propanoato)platinum(IV) and tetrachloro(O,O-dialkyl ethylenediamine-N,N'-di-3-propanoato)platinum(IV) complexes. The complexes were characterized by elemental anal., electronic absorption, IR, 1H and 13C NMR spectroscopy. The trans configuration of [Pt(eddp)Cl2] complex was confirmed by x-ray crystallog.

ACCESSION NUMBER: 2004:87439 CAPLUS  
DOCUMENT NUMBER: 141:198941  
TITLE: Complex compounds of platinum(IV) and O,O-dialkyl-ethylenediamine-N,N'-di-3-propanoate ligands. A structural evidence for geometry of hydrolytic product of some esters  
AUTHOR(S): Sabo, Tibor J.; Kaluderovic, Goran N.; Grgric-Sipka, Sanja R.; Heinemann, Frank W.; Trifunovic, Srecko R.  
CORPORATE SOURCE: Faculty of Chemistry, University of Belgrade, Belgrade, 11001, Yugoslavia  
SOURCE: Inorganic Chemistry Communications (2004), 7(2), 241-244  
CODEN: ICCOFP; ISSN: 1387-7003  
PUBLISHER: Elsevier Science B.V.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 32808-28-9 147416-88-4 493001-28-8  
493001-29-9 493001-30-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reactant for preparation of platinum ethylenediaminedipropanoate complex)  
RN 32808-28-9 CAPLUS  
CN β-Alanine, N,N'-1,2-ethanediy]bis-, dimethyl ester, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 147416-88-4 CAPLUS  
CN β-Alanine, N,N'-1,2-ethanediy]bis-, diethyl ester, dihydrochloride (9CI) (CA INDEX NAME)



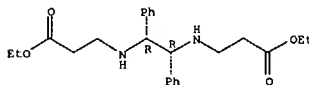
● 2 HCl

RN 493001-28-8 CAPLUS  
CN β-Alanine, N,N'-1,2-ethanediy]bis-, dipropyl ester, dihydrochloride

Page 55

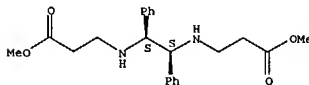
L8 ANSWER 1 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
CN β-Alanine, N,N'-[(1R,2R)-1,2-diphenyl-1,2-ethanediy]bis-, diethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



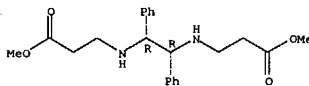
RN 663931-98-4 CAPLUS  
CN β-Alanine, N,N'-[(1S,2S)-1,2-diphenyl-1,2-ethanediy]bis-, dimethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



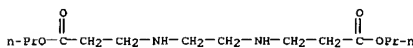
RN 663931-99-5 CAPLUS  
CN β-Alanine, N,N'-[(1R,2R)-1,2-diphenyl-1,2-ethanediy]bis-, dimethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



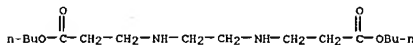
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L8 ANSWER 2 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
(9CI) (CA INDEX NAME)



● 2 HCl

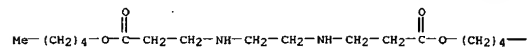
RN 493001-29-9 CAPLUS  
CN β-Alanine, N,N'-1,2-ethanediy]bis-, dibutyl ester, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 493001-30-2 CAPLUS  
CN β-Alanine, N,N'-1,2-ethanediy]bis-, dipentyl ester, dihydrochloride (9CI) (CA INDEX NAME)

PAGE 1-A



● 2 HCl

PAGE 1-B

— Me  
REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

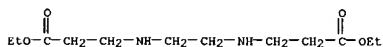
L8 ANSWER 3 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB The novel N,N-type bidentate ligands, diethyl-(deeddp-2HCl), dipropyl- (dpddp-2HCl), dibutyl- (dbddp-2HCl) and dipentyl- (dvddp-2HCl) esters of ethylenediamine-N,N'-di-3-propanoic acid dihydrochloride (H2eddp-2HCl), and the eddp-Co(III) complexes with the corresponding esters were synthesized via an air oxidation method. During the preparation of these complexes, one part of the ester coordinated as a bidentate ligand, and the other part hydrolyzed and coordinated as a tetradentate ONNO ligand geospecifically to the Co(III) ion to give only one isomer, C1-sym., which was characterized by electronic absorption, IR, 1H and 13C NMR spectroscopy and elemental anal.

It is of interest that this is the first Co(III)(eddp)(N,N'-R2-en)-type complex preparation, which gives only one isomer, without regard to the number of atoms in the alkyl chain.

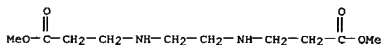
ACCESSION NUMBER: 2002:838389 CAPLUS  
 DOCUMENT NUMBER: 138:146622  
 TITLE: Synthesis and characterization of the cobalt(III) complexes with ethylenediamine-N,N'-di-3-propanoate ligand and its esters  
 AUTHOR(S): Kaluderovic, Goran N.; Sabo, Tibor J.  
 CORPORATE SOURCE: Faculty of Chemistry, University of Belgrade, Belgrade, 11001, Yugoslavia  
 SOURCE: Polyhedron (2002), 21(22), 2277-2282  
 CODEN: PLYHDE; ISSN: 0277-5387  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 138:146622

IT 19294-22-5,  $\beta$ -Alanine, N,N'-1,2-ethanediybis-, diethyl ester  
 23939-28-8,  $\beta$ -Alanine, N,N'-1,2-ethanediybis-, dimethyl ester  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation and complexation with cobalt(III) via air oxidation method)

RN 19294-22-5 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediybis-, diethyl ester (9CI) (CA INDEX NAME)

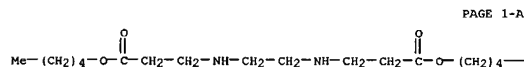


RN 23939-28-8 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediybis-, dimethyl ester (9CI) (CA INDEX NAME)



IT 32808-28-9P 147416-88-4P 493001-28-8P  
 493001-29-9P 493001-30-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

L8 ANSWER 3 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediybis-, dipentyl ester, dihydrochloride (9CI) (CA INDEX NAME)



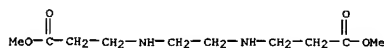
● 2 HCl

PAGE 1-B

— Me

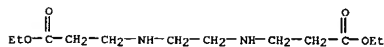
REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L8 ANSWER 3 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 (Reactant or reagent)  
 (prepn. and complexation with cobalt(III) via air oxidn. method)  
 RN 32808-28-9 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediybis-, dimethyl ester, dihydrochloride (9CI) (CA INDEX NAME)



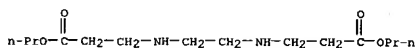
● 2 HCl

RN 147416-88-4 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediybis-, diethyl ester, dihydrochloride (9CI) (CA INDEX NAME)



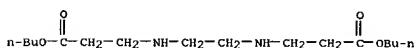
● 2 HCl

RN 493001-28-8 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediybis-, dipropyl ester, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

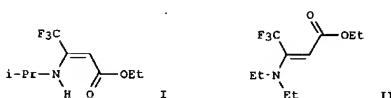
RN 493001-29-9 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediybis-, dibutyl ester, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

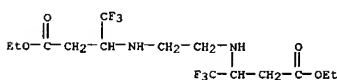
RN 493001-30-2 CAPLUS

L8 ANSWER 4 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 GI



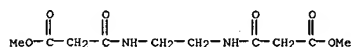
AB (E)- or (Z)-perfluorinated  $\beta$ -enaminoesters, e.g. I and II, were prepared by direct addition of primary or secondary amines to Et perfluoroalkynoates without any catalyst.

ACCESSION NUMBER: 2002:732461 CAPLUS  
 DOCUMENT NUMBER: 138:187392  
 TITLE: Easy synthesis of (E)- or (Z)-perfluorinated  $\beta$ -enaminoesters  
 AUTHOR(S): Prie, Gildas; Richard, Sebastien; Parrain, Jean-Luc; Duchene, Alain; Abarbri, Mohamed  
 CORPORATE SOURCE: Faculte des Sciences de Tours, Laboratoire de Physicochimie des Interfaces et des Milieux Reactionnels, Tours, 37200, Fr.  
 SOURCE: Journal of Fluorine Chemistry (2002), 117(1), 35-41  
 CODEN: JFLCAR; ISSN: 0022-1139  
 PUBLISHER: Elsevier Science B.V.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 138:187392  
 IT 498583-19-0P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (synthesis of (E)- or (Z)-perfluorinated  $\beta$ -enaminoesters)  
 RN 498583-19-0 CAPLUS  
 CN Butanoic acid, 3,3'-(1,2-ethanediyldiimino)bis(4,4,4-trifluoro-, diethyl ester (9CI) (CA INDEX NAME)



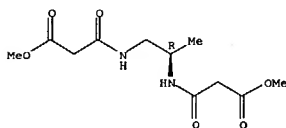
REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L8 ANSWER 5 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Syntheses of different open chain polyamines starting from enzymically prepared bis(amidoesters) are described. Some of these polyamines are also used as precursors in the syntheses of tetraazamacrocycles. This methodol. can also be applied to the synthesis of chiral compds.  
 ACCESSION NUMBER: 2002:619869 CAPLUS  
 DOCUMENT NUMBER: 138:14042  
 TITLE: Chemoenzymatic syntheses of polyamines and tetraazamacrocycles  
 AUTHOR(S): Rubio, Mercedes; Astorga, Covadonga; Alfonso, Ignacio;  
 CORPORATE SOURCE: Rebolledo, Francisca; Gotor, Vicente  
 SOURCE: Departamento de Química Organica e Inorganica, Universidad de Oviedo, Oviedo, 33071, Spain  
 PUBLISHER: Synthetic Communications (2002), 32(16), 2441-2452  
 DOCUMENT TYPE: CODEN: SYNCV; ISSN: 0039-7911  
 LANGUAGE: Marcel Dekker, Inc.  
 OTHER SOURCE(S): Journal  
 IT 477808-21-2 CASREACT 138:14042  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (chemoenzymic preparation of polyamines and tetraazamacrocycles)  
 RN 477808-21-2 CAPLUS  
 CN Propanoic acid, 3,3'-[(1R)-1-methyl-1,2-ethanediyl]diimino]bis[3-oxo-, dimethyl ester (9CI) (CA INDEX NAME)



IT 156331-21-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (chemoenzymic preparation of polyamines and tetraazamacrocycles)  
 RN 156331-21-4 CAPLUS  
 CN Propanoic acid, 3,3'-[(1R)-1-methyl-1,2-ethanediyl]diimino]bis[3-oxo-, dimethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB (CH<sub>2</sub>)<sub>n</sub>[N(RCH(CO<sub>2</sub>CmH<sub>2</sub>m+1)CH<sub>2</sub>CO<sub>2</sub>CmH<sub>2</sub>m+1)]<sub>2</sub> (R = C8-20 acyl; m, n = 2-6) are prepared. Thus, (CH<sub>2</sub>)<sub>n</sub>[N(RCH(CO<sub>2</sub>CmH<sub>2</sub>m+1)CH<sub>2</sub>CO<sub>2</sub>CmH<sub>2</sub>m+1)]<sub>2</sub> (R = H, n = n = 2) was acylated with lauroyl chloride to give the corresponding amide.

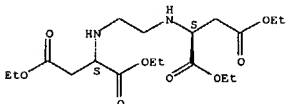
ACCESSION NUMBER: 2002:566257 CAPLUS  
 DOCUMENT NUMBER: 137:124933  
 TITLE: Preparation of amides of N,N'-alkylenediaminedisuccinic acid esters as

intermediates for anionic surfactants  
 INVENTOR(S): Tsubone, Kazuyuki  
 PATENT ASSIGNEE(S): Kanebo, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002212156	AZ	20020731	JP 2001-8626	20010117
PRIORITY APPLN. INFO:			JP 2001-8626	20010117

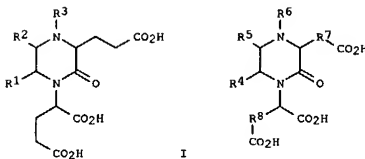
OTHER SOURCE(S): MARPAT 137:124933  
 IT 1115-44-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of amides of N,N'-alkylenediaminedisuccinic acid esters as intermediates for anionic surfactants)  
 RN 1115-44-2 CAPLUS  
 CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetraethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L8 ANSWER 5 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

L8 ANSWER 7 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 GI



AB The title compds. (I; R1, R2 = H, HO, optionally hydroxy-substituted linear or branched C1-6 alkyl; R3 = H, HO, SO<sub>3</sub>H, optionally HO-, HO<sub>3</sub>S-, or HO<sub>2</sub>C-substituted linear or branched C1-6 alkyl, acyl having linear or branched C1-20 alkyl or alkenyl) or salts thereof, which are useful as raw materials for drugs, agrochems., antibacterial agents, chelating agents, or polymers, are safely and efficiently prepared by a process applicable for industrial production. A process for preparation I comprises cyclization of HO<sub>2</sub>C-R8-CH(CO<sub>2</sub>H)NHCH(R4)CH(R5)N(R6)CH(CO<sub>2</sub>H)-R7-CO<sub>2</sub>H (R4, R5 = H, HO, optionally hydroxy-substituted linear or branched C1-6 alkyl; R6 = H, HO, SO<sub>3</sub>H, optionally HO-, HO<sub>3</sub>S-, or HO<sub>2</sub>C-substituted linear or branched C1-6 alkyl, acyl having linear or branched C1-20 alkyl or alkenyl; R7 = R8 = CH<sub>2</sub> or CH<sub>2</sub>CH<sub>2</sub>) in the presence of α-hydroxycarboxylic acid in a solution or slurry to give intermediates (II; R4, R5, R6, R7, and R8 are same as R4, R5, R6, R7, and R8, resp.) followed by addition of substituents on the N atom of 4-position. α-Hydroxycarboxylic acid serves as a catalyst to increase the reaction rate and improves selectivity. Thus, 0.076 g glycolic acid was added to a slurry of 2.0 g (S,S)-ethylenediamine-N,N'-diglutamic acid and 400 mL water, stirred at 80° for 6 h, filtered at 80°, and concentrated for crystallization. The precipitated crystals were dissolved in 300 mL H<sub>2</sub>O at 80° and the resulting solution was filtered, cooled, left to stand at 10°, and filtered to give 86.8% (3S)-1-[(1S)-1,3-dicarboxypropyl]-3-(2-carboxyethyl)piperazin-2-one (III).

In a biodegrdn. test described in OECD chemical test guideline (modified SCAS method), III was nearly completely degraded in activated sludge.

ACCESSION NUMBER: 2002:286697 CAPLUS  
 DOCUMENT NUMBER: 136:309938  
 TITLE: Preparation of new piperazinone derivatives by cyclization of N,N'-bis(dicarboxyalkyl)ethylenediamine derivatives  
 INVENTOR(S): Nogami, Hiroyuki; Anzai, Ryuichi; Yoshioka, Akira

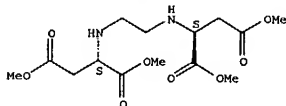
L8 ANSWER 7 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
PATENT ASSIGNER(S): Mitsubishi Rayon Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002114766	A2	20020416	JP 2000-304904	20001004

PRIORITY APPLN. INFO.: JP 2000-304904 20001004

OTHER SOURCE(S): CASREACT 136:309938; MARPAT 136:309938  
IT 410077-50-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of new piperazinone derivs. by cyclization of N,N'-bis(dicarboxyalkyl)ethylenediamine derivs. in presence of  $\alpha$ -hydroxy carboxylic acid)  
RN 410077-50-8 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediybis-, tetramethyl ester, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



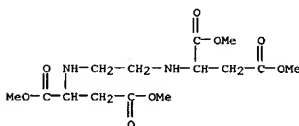
● HCl

L8 ANSWER 8 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Amide esters, useful as intermediates for surfactants, are prepared by acylation of amino esters by fatty acid halides in solvent mixts. comprising H<sub>2</sub>O and water-incompatible organic solvents in the presence of surfactants. Tetra-Me ethylenediamine-N,N-disuccinate.2HCl was acylated by lauric acid chloride in H<sub>2</sub>O-PhMe in the presence of Na laurate at room temperature for 12 h to give diacylated product.  
ACCESSION NUMBER: 2001:927330 CAPLUS  
DOCUMENT NUMBER: 136:53534  
TITLE: Preparation of high-purity amide esters  
INVENTOR(S): Tsubone, Kazuyuki  
PATENT ASSIGNEE(S): Kanebo, Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001354636	A2	20011225	JP 2000-176401	20000613

PRIORITY APPLN. INFO.: JP 2000-176401 20000613

OTHER SOURCE(S): CASREACT 136:53534  
IT 382136-89-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of high-purity amide esters)  
RN 382136-89-2 CAPLUS  
CN Aspartic acid, N,N'-1,2-ethanediybis-, tetramethyl ester, dihydrochloride (9CI) (CA INDEX NAME)

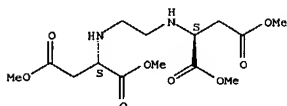


● 2 HCl

L8 ANSWER 9 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Acylase I was used to catalyze the enantioselective butanolysis of tri-Me 2-[(carboxymethyl)oxy]succinate (E = 30) and N-carboxymethylaspartate (E = 9) exclusively at the most sterically hindered of the three ester groups (the position  $\alpha$  to the asym. center). Gram-scale resolution allowed the preparation of the less reactive tri-Me (S)-2-[(carboxymethyl)oxy]succinate (56% e.e.), that of the (R)-butyldimethyl regioisomer (78% e.e.) at 55% conversion and finally the preparation of the corresponding trisodium carboxylate by saponification. Acylase I was shown to transform (±)-Me N-acetylmethionine and (±)-valine to the corresponding (S)-amino acids through ester hydrolysis-N-acetyl transfer sequence with absolute chemo- and enantioselectivity. Butanolysis of Me N-acetylmethionine stopped in the formation of the Bu ester (E = 12), the valine derivative being totally unreactive.

ACCESSION NUMBER: 2001:720994 CAPLUS  
DOCUMENT NUMBER: 136:183530  
TITLE: Use of enantio-, chemo- and regioselectivity of acylase I. Resolution of polycarboxylic acid esters  
AUTHOR(S): Liljebld, A.; Aksela, R.; Kanerva, L. T.  
CORPORATE SOURCE: Laboratory of Synthetic Drug Chemistry and Department of Chemistry, University of Turku, Turku, FIN-20520, Finland  
SOURCE: Tetrahedron: Asymmetry (2001), 12(14), 2059-2066  
CODEN: TASYE3; ISSN: 0957-4166  
PUBLISHER: Elsevier Science Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 185514-39-0P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(resolution of polycarboxylic acid esters with acylase I)  
RN 185514-39-0 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediybis-, tetramethyl ester (9CI) (CA INDEX NAME)

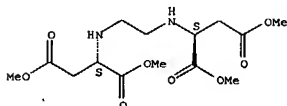
Absolute stereochemistry.



REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L8 ANSWER 10 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Three N,N'-ethylenebis(L-amino acid) ligands have been obtained simultaneously with three N,N'-(1,4-piperazinediyl)bis(S)-alkanoic acid and four N,N'-ethylenedi-peptide products, by reacting a mixture of L-histidine Me ester and L-aspartic acid di-Me ester with glyoxal in the presence of sodium cyanotrihydroborate in methanol. Europium(III) complexes with N,N'-ethylenebis(L-amino acid) ligands were useful as chiral NMR shift reagents for some unprotected natural  $\alpha$ -amino acids as substrates in neutral aqueous solution, as characterized by large enantiomeric shift differences and unbroadened signal shapes on high-resolution NMR spectroscopy. In addition, the acid-dissociation consts. of six bis(amino acid) ligands and the stability constant of the europium(III) complex with N,N'-ethylenedi(L-histidine) were obtained by potentiometric titration  
ACCESSION NUMBER: 2001:386426 CAPLUS  
DOCUMENT NUMBER: 135:107553  
TITLE: Europium(III)-N,N'-ethylenebis(L-amino acid) complexes  
as new chiral NMR lanthanide shift reagents for unprotected  $\alpha$ -amino acids in neutral aqueous solution  
AUTHOR(S): Takemura, Makoto; Yamato, Kazuhiro; Doe, Matsumi; Watanabe, Masaaki; Miyake, Hiroyuki; Kikunaga, Toshimitsu; Yanagihara, Naohisa; Kojima, Yoshitane  
CORPORATE SOURCE: Department of Chemistry, Graduate School of Science, Osaka City University, Sugimoto, Sumiyoshi-ku, Osaka, 558-8585, Japan  
SOURCE: Bulletin of the Chemical Society of Japan (2001), 74(4), 707-715  
CODEN: BCSJAB; ISSN: 0009-2673  
PUBLISHER: Chemical Society of Japan  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 135:107553  
IT 185514-39-0P  
RL: FRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(preparation of Europium complexes of for use as lanthanide shift reagents in aqueous solution)  
RN 185514-39-0 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediybis-, tetramethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

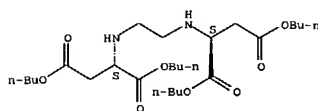
L8 ANSWER 11 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Ethylenediaminedisuccinic acid tetra(C1-4 alkyl) esters are prepared by reaction of ethylenediaminedisuccinic acid (I) with  $\geq 10$ -fold (by mol) HCl-containing lower alcs. S,S-I was esterified with MeOH containing 10 weight% HCl at room temperature for 50 h to give 50% (by weight) S,S-I tetra-Me ester. 2HCl.

ACCESSION NUMBER: 2001:366090 CAPLUS  
 DOCUMENT NUMBER: 134:367196  
 TITLE: Preparation of ethylenediaminedisuccinic acid tetraalkyl esters as intermediates for surfactants  
 INVENTOR(S): Tsubone, Kazuyuki  
 PATENT ASSIGNEE(S): Kanebo, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2001139530	A2	20010522	JP 1999-327888	19991118
PRIORITY APPLN. INFO.:			JP 1999-327888	19991118

OTHER SOURCE(S): CASREACT 134:367196  
 IT 69812-79-9P 185514-39-0P 274256-18-7P  
 RL: IMP (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of ethylenediaminedisuccinic acid tetraalkyl esters as intermediates for surfactants)  
 RN 69812-79-9 CAPLUS  
 CN L-Aspartic acid, N,N'-1,2-ethanediyibis-, tetrabutyl ester, dihydrochloride (9CI) (CA INDEX NAME)

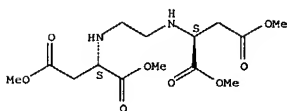
Absolute stereochemistry.



● 2 HCl

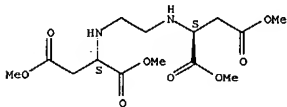
RN 185514-39-0 CAPLUS  
 CN L-Aspartic acid, N,N'-1,2-ethanediyibis-, tetramethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

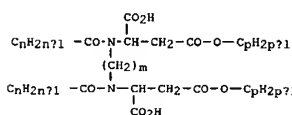


RN 274256-18-7 CAPLUS  
 CN L-Aspartic acid, N,N'-1,2-ethanediyibis-, tetramethyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● 2 HCl

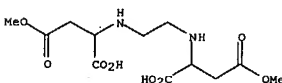


AB Title compds. I ( $m = 2-10$ ;  $n + 1 = 8-20$ ;  $p = 1-4$ ) are prepared as intermediates for anionic surfactants having 2 chains and 2 hydrophilic groups.  $\alpha,\omega$ -Ethylenebis(DL-aspartic acid  $\beta$ -Me ester) was amidated by lauric acid chloride in aqueous Me2CO at room temperature for 2 h to give I ( $m = 2$ ,  $n + 1 = 12$ ,  $p = 1$ ).

ACCESSION NUMBER: 2000:819157 CAPLUS  
 DOCUMENT NUMBER: 133:362966  
 TITLE: Preparation of alkylenebis(aspartate) amides as intermediates for surfactants  
 INVENTOR(S): Tsubone, Kazuyuki  
 PATENT ASSIGNEE(S): Kanebo, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000319243	A2	20001121	JP 1999-125619	19990506
PRIORITY APPLN. INFO.:			JP 1999-125619	19990506

OTHER SOURCE(S): MARPAT 133:362966  
 IT 56972-55-5  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of alkylenebis(aspartate) amides as intermediates for surfactants)  
 RN 56972-55-5 CAPLUS  
 CN Aspartic acid, N,N'-1,2-ethanediyibis-, 4,4'-dimethyl ester (9CI) (CA INDEX NAME)

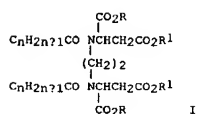
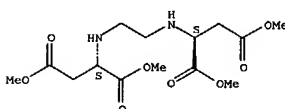


L8 ANSWER 13 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB The cosmetics contain anionic surfactants having 2 chains, 2 hydrophilic groups, and unneutralized CO<sub>2</sub>H groups. Me 1,2-ethylenediamine-N,N'-bis(aspartate) was stirred with lauroyl chloride and the product was neutralized with NaOH to give di-Na 1,2-ethylenediamine-N,N'-bis(lauryl)-N,N'-bis(aspartate) (I). A shampoo containing I 8, polyoxyethylene dodecyl ether 1, and H<sub>2</sub>O 91 weight% did not cause skin erythema.  
 ACCESSION NUMBER: 2000:658011 CAPLUS  
 DOCUMENT NUMBER: 133:242400  
 TITLE: Nonirritant cosmetics containing anionic surfactants  
 INVENTOR(S): Tsubone, Kazuyuki; Ogawa, Tomoyasu  
 PATENT ASSIGNEE(S): Kanebo, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000256145	A2	20000919	JP 1999-61377	19990309
PRIORITY APPLN. INFO.:			JP 1999-61377	19990309

IT 185514-39-0  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (nonirritant cosmetics containing ethylenediaminedicarboxylate-type anionic surfactants)  
 RN 185514-39-0 CAPLUS  
 CN L-Aspartic acid, N,N'-1,2-ethanedibis-, tetramethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



AB The title compds. [(S,S)-I; R = Me, R<sup>1</sup> = C<sub>m</sub>H<sub>2m+1</sub> (wherein n+1 = 8-20; m = 1-m); or R = R<sup>1</sup> = H or Na], which are excellent in biodegradability and useful as anionic surfactants (no data), are prepared by N-acylation of (S,S)-ethylenediaminedisuccinic acid tetra(Cl-8 alkyl) ester with C<sub>n</sub>H<sub>2n+1</sub>COX (n+1 = 8-20, X = halo). Offer the new amide chemical compound which is superior in the biodegradability. Thus, 0.01 mol (S,S)-ethylenediaminedisuccinic acid tetra-Me ester dihydrochloride and 0.01 mol NaOH were dissolved in 200 mL H<sub>2</sub>O/Et<sub>2</sub>O (1:1), followed adding dropwise 0.02 mol lauroyl chloride with stirring at room temperature, and the resulting mixture was stirred for 1 h, acidified with HCl to give, after workup and silica gel chromatog., (S,S)-I (n = 11, R = R<sup>1</sup> = Me) which was saponified with NaOH in H<sub>2</sub>O to give an aqueous solution of (S,S)-I (n = 11, R = R<sup>1</sup> = Na).

The latter solution was acidified with HCl to pH 1 and cooled, and the precipitate was filtered, dissolved in a mixture of H<sub>2</sub>O and THF with warming. The precipitated amorphous crystals were filtered off and recrystd. under the same condition to give (S,S)-I (n = 11, R = R<sup>1</sup> = H).

ACCESSION NUMBER: 2000:585421 CAPLUS  
 DOCUMENT NUMBER: 133:177492  
 TITLE: New amide, N,N'-ethylenebis(N-alkanoylaspartic acid), and process for its preparation  
 INVENTOR(S): Tsubone, Kazuyuki  
 PATENT ASSIGNEE(S): Kanebo, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

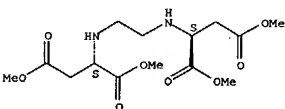
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000229924	A2	20000822	JP 1998-375918	19981218
PRIORITY APPLN. INFO.:			JP 1998-375090	A 19981211

OTHER SOURCE(S): CASREACT 133:177492; MARPAT 133:177492

IT 274256-18-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of N,N'-ethylene(N-alkanoylaspartic acid) as anionic surfactants by acylation of (S,S)-ethylenediaminedisuccinic acid

L8 ANSWER 14 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 RN 274256-18-7 CAPLUS  
 CN L-Aspartic acid, N,N'-1,2-ethanedibis-, tetramethyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



●2 HCl



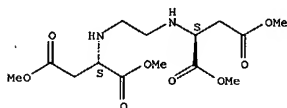
L8 ANSWER 15 OF 64 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB MeOCCOCH(CH<sub>2</sub>CO<sub>2</sub>Me)N(COCH<sub>2</sub>H<sub>2</sub>n+1)(CH<sub>2</sub>)mN(COCH<sub>2</sub>H<sub>2</sub>n+1)CH(CO<sub>2</sub>Me)CH<sub>2</sub>CO<sub>2</sub>Me (n + 1 = 8-20, m = 2-6) or HO<sub>2</sub>CCH(CH<sub>2</sub>CO<sub>2</sub>H)N(COCH<sub>2</sub>H<sub>2</sub>n+1)(CH<sub>2</sub>)mN(COCH<sub>2</sub>H<sub>2</sub>n+1)CH(CO<sub>2</sub>H)CH<sub>2</sub>CO<sub>2</sub>H (I; 2n + 1 = 8-20, m = 2-6) are manufactured MeOCCOCH(CH<sub>2</sub>CO<sub>2</sub>Me)NH(CH<sub>2</sub>)2NHCH(CH<sub>2</sub>CO<sub>2</sub>Me)CH<sub>2</sub>CO<sub>2</sub>Me.2HCl was reacted with lauroyl chloride in the presence of NaOH in an H<sub>2</sub>O-Et<sub>2</sub>O mixture at room temperature for 1 h to give I (2n + 1 = 12, m = 2).  
 ACCESSION NUMBER: 2000:405853 CAPLUS  
 DOCUMENT NUMBER: 133:32094  
 TITLE: Intermediates for anionic surfactants having two chains and two hydrophilic groups  
 INVENTOR(S): Tsubone, Kazuyuki; Mori, Kenji  
 PATENT ASSIGNEE(S): Kanebo, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
 CODEN: JKKXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000169439	A2	20000620	JP 1998-366078	19981207
PRIORITY APPLN. INFO.:			JP 1998-366078	19981207

OTHER SOURCE(S): MARPAT 133:32094  
 IT 274256-18-7

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (intermediates for anionic surfactants having two chains and two hydrophilic groups)  
 RN 274256-18-7 CAPLUS  
 CN L-Aspartic acid, N,N'-1,2-ethanedilylbis-, tetramethyl ester, dihydrochloride (9CI) (CA INDEX NAME)

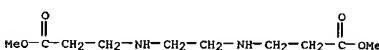
Absolute stereochemistry.



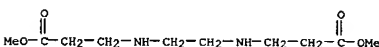
●2 HCl

L8 ANSWER 16 OF 64 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB A new-typed latent curing agent for epoxy resin was synthesized from ethylenediamine (I) and Me acrylate (II) in alc., and was characterized by IR, elementary anal., and TG. The results showed that the product reached the requirement of a good latent curing agent for epoxy resin. Optimum synthetic conditions were obtained: temperature 40- 50° and I:II 1:2.2 (mass ratio).  
 ACCESSION NUMBER: 2000:283847 CAPLUS  
 DOCUMENT NUMBER: 134:5488  
 TITLE: Synthesis and characterization of new-typed latent curing agent for epoxy resin  
 AUTHOR(S): Zhong, Wenbin; Huang, Qigu; Zou, Ailan; Wang, Xiyu  
 CORPORATE SOURCE: College of Chemistry and Chemical Engineering, Xiangtan University, Xiangtan, 411105, Peop. Rep. China  
 SOURCE: Zhanjie (2000), 21(2), 22-23  
 CODEN: ZHANET; ISSN: 1001-5922  
 PUBLISHER: Zhanjie Bianjibu  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese  
 IT 23939-28-8P

RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
 (synthesis and characterization of new-typed latent curing agent for epoxy resin from ethylenediamine and Me acrylate)  
 RN 23939-28-8 CAPLUS  
 CN β-Alanine, N,N'-1,2-ethanedilylbis-, dimethyl ester (9CI) (CA INDEX NAME)



IT 23939-28-8DP, polymers with epoxy resins  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (synthesis and characterization of new-typed latent curing agent for epoxy resin from ethylenediamine and Me acrylate)  
 RN 23939-28-8 CAPLUS  
 CN β-Alanine, N,N'-1,2-ethanedilylbis-, dimethyl ester (9CI) (CA INDEX NAME)



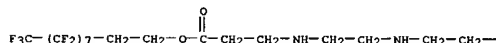
L8 ANSWER 17 OF 64 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB Aqueous treating agents for a substrate comprise compds. with pendant saturated perfluoroalkyl groups, where some of the perfluoroalkyl groups are straight chain and some are branched chain; and applying the polymer to the substrate; where 60-90% of the perfluoroalkyl groups are straight chain and .apprx.10-40% of the perfluoroalkyl groups are branched chain.  
 ACCESSION NUMBER: 2000:238068 CAPLUS  
 DOCUMENT NUMBER: 132:266766  
 TITLE: Straight-chain and branched perfluoroalkyl halides and derivatives, their preparation, fluoropolymers, and use as oil- and water-repellant treatment agents for surfaces  
 INVENTOR(S): Behr, Frederick E.; Dams, Rudolf J.; Dewitte, Johan E.; Hagen, Donald F.  
 PATENT ASSIGNEE(S): 3M Innovative Properties Company, USA  
 SOURCE: U.S., 22 pp., Cont.-in-part of U.S. Ser. No. 723,049, abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6048952	A	20000411	US 1997-794798	19970204
JP 2002138078	A2	20020514	JP 2001-204928	19920710
US 6365769	B1	20020402	US 2000-504483	20000215
PRIORITY APPLN. INFO.:			US 1991-728184	B1 19910710
			US 1994-314939	B3 19940929
			US 1995-476954	B1 19950607
			US 1996-723049	B2 19960930
			JP 1992-183345	A3 19920710
			US 1997-794798	A3 19970204

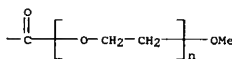
IT 218462-62-5P  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (straight-chain and branched perfluoroalkyl halides and derivs. for use as oil- and water-repellant treatment agents for fabrics and other surfaces)  
 RN 218462-62-5 CAPLUS  
 CN Poly(oxy-1,2-ethanedilyl), α-[3-[[[2-[[3-[[3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl]oxy]-3-oxopropyl]amino]ethyl]amino]-1-oxopropyl]-ω-methoxy- (9CI) (CA INDEX NAME)

L8 ANSWER 17 OF 64 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L8 ANSWER 18 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN

AB New amides represented by formula  
 $XO_2CCH_2CH(CO_2X)N(COCnH_{2n+1})(CH_2)_mN(COCnH_{2n+1})CH(CO_2X)CH_2CO_2X$  ( $m = 2-10$ ;  $n+1 = 8-20$ ;  $X =$  one or  $\geq 2$  of H, mono or divalent alkali metal, alkaline earth metal, ammonium, or organic ammonium ion), which are excellent in biodegradability, are prepared

Thus, 0.02 mol lauroyl chloride was added dropwise to a solution of 0.01 mol (S,S)-ethylenediaminedisuccinic (N,N'-ethylene diaspartic acid) acid tetra-Me ester and 0.04 mol NaOH in 200 mL H<sub>2</sub>O/Et<sub>2</sub>O (1/1) at room temperature, stirred for 1 h, and acidified with aqueous HCl to give (S,S)-N,N'-didodecanoylethylenediaminedisuccinic acid tetra-Me ester. The latter ester (0.1 mol) and NaOH 0.4 mol was added to 200 mL H<sub>2</sub>O, stirred at 80° for 3 h, acidified with aqueous HCl to pH 1, and cooled to give (S,S)-N,N'-didodecanoylethylenediaminedisuccinic acid (I). I showed more biodegradability (99.5%) than (R,R)-isomer (74.2%) and (S,R)-isomer (45.8%) in JIS K-336-3 biodegradability test. A shampoo containing 15.8 weight%

I, 2Na was excellent in foaming and cleaning property.

ACCESSION NUMBER: 2000:123267 CAPLUS

DOCUMENT NUMBER: 132:166511

TITLE: Preparation of N,N'-diacyl-N,N'-alkylene diaspartic acid as biodegradable anionic surfactants

INVENTOR(S): Tsubone, Kazuyuki

PATENT ASSIGNEE(S): Kanebo, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000053625	A2	20000222	JP 1998-375613	19981215
PRIORITY APPLN. INFO.:			JP 1998-154231	19980603

OTHER SOURCE(S): MARPAT 132:166511

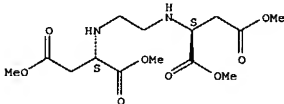
IT 185514-39-0

RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of N,N'-diacyl-N,N'-alkylene diaspartic acid as biodegradable anionic surfactants)

RN 185514-39-0 CAPLUS

CN L-Aspartic acid, N,N'-1,2-ethanediyldis-, tetramethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L8 ANSWER 18 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

L8 ANSWER 19 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN

AB Bis-amine bis-thiol tetra-ligands such as ethylene dicysteine (EC) and its di-Et ester (ECD) bind 99mTc efficiently at room temperature and neutral to alkaline

pH to form stable complexes. The use of bis-amine bis-thiol ligands as bifunctional chelating agents (BCAs) for labeling of bioactive compds. (peptides, diphosphonates, etc.) looks promising. To study the effect of extending the carboxylic side-group in 99mTc-L, L-EC and 99mTc-L, L-ECD,

the authors have synthesized ethylene bis-L-β-homocysteine (L,L-EhC) and its di-Et ester derivative L,L-EhCD, incorporating a methylene group between each of the carboxyl groups and the NZS2 tetra-ligand core. The more distant carboxyl groups could offer reduced steric hindrance in the use

of L,L-EhC and L,L-EhCD as BCAs. As for 99mTc-L, L-ECD, 99mTc-L, L-EhCD is neutral on electrophoresis at pH 6.0. In mice, brain uptake of 99mTc-L, L-EhCD is lower the 99mTc-L, L-ECD. Blood clearance of the two complexes is similar. The diacid 99mTc-L, L-EhC migrates to the same extent as the corresponding 99mTc-L, L-EC on electrophoresis at pH 3.2,

9.0 and 12, but it migrates 25% further at pH 6. Urine levels for 99mTc-L, L-EhC in mice are lower than those for 99mTc-L, L-EC (65% vs. 74% of I.D. at 10 min p.i. and 85% vs. 95% at 30 min p.i., resp.). The results show that the β-homocysteine derivs. retain the key characteristics of 99mTc-L, L-EC and 99mTc-L, L-ECD, i.e. easy formation of stable complexes with 99mTc, a high urinary excretion for 99mTc-L, L-EhC, and in the case of 99mTc-L, L-EhCD a neutral compound with appreciable

brain uptake. These properties indicate that L,L-EhC and L,L-EhCD merit further evaluation as BCAs with attractive conjugation properties.

ACCESSION NUMBER: 1999:512218 CAPLUS

DOCUMENT NUMBER: 131:286782

TITLE: Synthesis and evaluation of β-homocysteine derivatives of 99mTc-L, L-EC and 99mTc-L, L-ECD

AUTHOR(S): Mang'era, K. O.; Verbruggen, A.

CORPORATE SOURCE: Laboratory of Radiopharmaceutical Chemistry, K.U. Leuven, Louvain, B-3000, Belg.

SOURCE: Journal of Labeled Compounds & Radiopharmaceuticals (1999), 42(7), 683-699

CODEN: JLCRD4; ISSN: 0362-4803

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 154147-85-ODP, 99mTc-complex

RL: PREP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(preparation and evaluation of as radiopharmaceuticals)

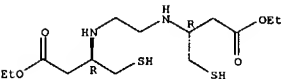
RN 154147-85-0 CAPLUS

CN Butanoic acid, 3,3'-(1,2-ethanediyldiimino)bis[4-mercapto-, diethyl

ester, (3R,3'R)- (9CI) (CA INDEX NAME)

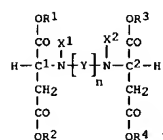
Absolute stereochemistry.

L8 ANSWER 19 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RECORD.

FORMAT

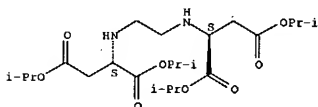


AB Diester amine adducts (II) wherein R1, R2, R3, R4 are each independently of one another C4-C22alkyl; C2-C22alkenyl; or C3-C7cycloalkyl; X1 and X2 are each independently of the other hydrogen, C1-C4alkyl; C2-C4hydroxyalkyl or C2-C4hydroxyhaloalkyl; Y is a radical of formula -(Al)m1-1(N(X3))p-; A1 is C2-C3alkylene or 2-hydroxy-n-propylene; X3 is hydrogen; C1-C4alkyl, C2-C4hydroxyalkyl; or C2-C4hydroxyhaloalkyl; (C) is an asym. carbon atom in the R- or S-configuration, wherein, if C1=R, C2=R;

4: C1=S, C2=S; and C1=R; C2=S; m1 is 1 or 2; and n is an integer from 1 to 4; p is 0 or 1, which may be in the form of free bases or ammonium salts, were prepared and tested for antibacterial effect. Said compds. are precursors of compds. having good complex-forming properties and are thus able to effectively bind heavy metal ions such as iron, zinc, magnesium or copper ions and to prevent metal-initiated oxidns. after enzymic or chemical cleavage. They have a plurality of uses, for example in foods, beverages, derusting and decalcification baths, as additives in liqs. for cooling-water circuits, in personal-care products, as bleaching stabilizers, in cleaning agents and detergents, in the textile industry and also as soft handle agents for organic fiber materials. Thus, 2-ethyl-1-hexanol was reacted with the acid chloride (generated in situ) of (S,S)-ethylenediaminedisuccinic acid to give, after workup, 73% (S,S)-1

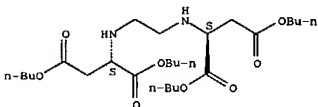
(R1-R4 = CH2CH(CH2CH3)(CH2)3CH3; X1-X2 = H; Y = CH2; n = 2) (II). In growth-inhibition tests using *Staphylococcus aureus* ATCC 9144, *Corynebacterium xerosis* ATCC 373, and *Escherichia coli* NCTC 8196, II (and the non-stereo-specific form of II) both showed inhibition of C. xerosis at 1% in EtOH.

ACCESSION NUMBER: 1999:325896 CAPLUS  
DOCUMENT NUMBER: 130:338391  
TITLE: Preparation and use of N,N'-alkylenediaminedisuccinic acid tetra-esters  
INVENTOR(S): Ehliis, Thomas; Fankhauser, Peter; Huglin, Dietmar  
PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
SOURCE: PCT Int. Appl., 27 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:



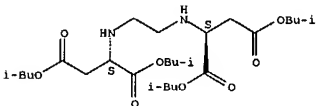
RN 223751-04-0 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrabutyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 223751-05-1 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrakis(2-methylpropyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

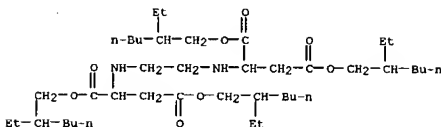


RN 223927-81-9 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrakis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

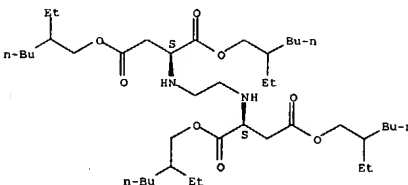
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9924392	A1	19990520	WO 1998-EP6811	19981027
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ,			
TM				
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
AU 9920478	A1	19990531	AU 1999-20478	19981027
AU 751838	B2	20020829		
EP 1028939	A1	20000823	EP 1998-965144	19981027
R:	CH, DE, DK, ES, FR, GB, IT, LI			
BR 9813987	A	20000926	BR 1998-13987	19981027
JP 2001522827	T2	20011120	JP 2000-520406	19981027
NZ 504290	A	20020828	NZ 1998-504290	19981027
RU 2189972	C2	20020927	RU 2000-111550	19981027
US 6369268	B1	20020409	US 2000-530537	20000501
PRIORITY APPL. INFO.:			EP 1997-810833	A 19971106
			WO 1998-EP6811	W 19981027

OTHER SOURCE(S): MARPAT 130:338391  
IT 223751-02-8P 223751-03-9P 223751-04-0P  
223751-05-1P 223927-81-9P 223927-84-2P  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); IMF (Industrial manufacture); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation) (preparation and biol. activity of)  
RN 223751-02-8 CAPLUS  
CN Aspartic acid, N,N'-1,2-ethanediylbis-, tetrakis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



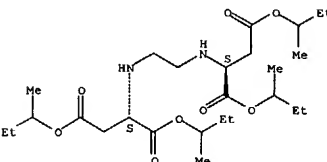
RN 223751-03-9 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrakis(1-methylethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



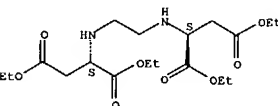
RN 223927-84-2 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrakis(1-methylpropyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 1115-44-2P 223750-98-9P 223750-99-0P  
223751-00-6P 223751-01-7P 223927-79-5P  
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation and reaction of in the synthesis of bridged tetra-ester diamines)  
RN 1115-44-2 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetraethyl ester (9CI) (CA INDEX NAME)

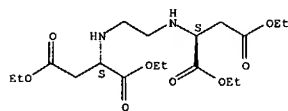
Absolute stereochemistry.



RN 223750-98-9 CAPLUS

L8 ANSWER 20 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetraethyl ester, hydrochloride  
(9CI) (CA INDEX NAME)

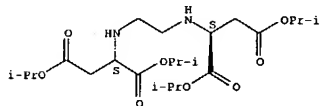
Absolute stereochemistry.



● x HCl

RN 223750-99-0 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrakis(1-methylethyl) ester, hydrochloride (9CI) (CA INDEX NAME)

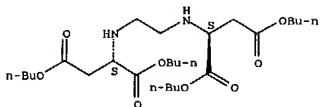
Absolute stereochemistry.



● x HCl

RN 223751-00-6 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrabutyl ester, hydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● x HCl

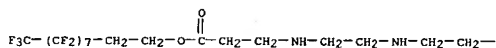
L8 ANSWER 21 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
AB A method for treating a substrate, comprises: providing a substrate; providing a polymer comprising a plurality of pendant saturated perfluoroalkyl groups, wherein some of the perfluoroalkyl groups are straight chain and some are branched chain; and applying the polymer to the substrate; wherein 65-85% of the perfluoroalkyl groups are straight chain and about 15 to about 35% of the perfluoroalkyl groups are branched chain. These mixts. contain some compds. with a straight perfluoroalkyl group and some with a branched perfluoroalkyl group. Methods of preparation and use are also described.

ACCESSION NUMBER: 1999:12326 CAPLUS  
DOCUMENT NUMBER: 130:83186  
TITLE: Perfluoroalkyl halides and derivatives for surface treatment  
INVENTOR(S): Behr, Frederick E.; Dams, Rudolf J.; Dewitte, Johan E.; Hagen, Donald F.  
PATENT ASSIGNEE(S): Minnesota Mining & Manufacturing Company, USA  
SOURCE: U.S., 22 pp., Cont.-in-part of U.S. Ser. No. 489,094, abandoned.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 3  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5852148	A	19981222	US 1997-794828	19970204
JP 2002138078	A2	20020514	JP 2001-204928	19920710
PRIORITY APPLN. INFO.:			US 1991-728184	B1 19910710
			US 1994-314939	B3 19940929
			US 1995-489094	B2 19950609
			JP 1992-183345	A3 19920710

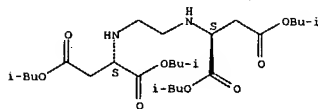
IT 218462-62-5P  
RI: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(perfluoroalkyl halides and derivs. for surface treatment)  
RN 218462-62-5 CAPLUS  
CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -[3-[[[3-[(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl)oxy]-3-oxopropyl]amino]ethyl]amino]-1-oxopropyl]- $\alpha$ -methoxy- (9CI) (CA INDEX NAME)

PAGE 1-A



L8 ANSWER 20 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
RN 223751-01-7 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrakis(2-methylpropyl) ester, hydrochloride (9CI) (CA INDEX NAME)

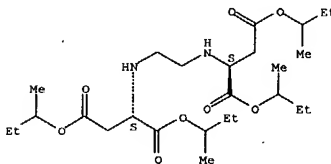
Absolute stereochemistry.



● x HCl

RN 223927-79-5 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrakis(1-methylpropyl) ester, hydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

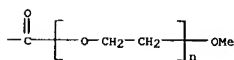


● x HCl

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L8 ANSWER 21 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

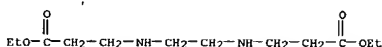
PAGE 1-B



REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

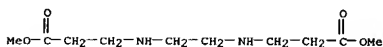
L8 ANSWER 22 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Chemical models of active sites of diiron oxo proteins were synthesized.  
 The polydentate ligands are EDTA derivs. which provide a balanced supply of nitrogen atoms and carboxylate groups together with an oxidizable Ph moiety, thus mimicking both the iron coordination in methane monooxygenase and a nearby substrate site. All the diferric complexes were characterized in solution by ESI-MS, optical absorption, and in some cases by 1H NMR. In the case of the ligand L1 (N,N'-bis(3,4,5-trimethoxybenzyl)ethylenediamine N,N'-diacetic acid), the X-ray structure (tetragonal, space group I41/a, R(F) = 0.109) of the corresponding iron complex was determined, revealing an original tetranuclear unit, Fe4O2(L1)4·10H2O, issued from the dimerization of two [Fe2O(L1)2] units linked by carboxylate bridges. In a solution containing water or acetate, the tetranuclear complex decomposed into dinuclear complexes, which proved to be able to react with hydrogen peroxide or dioxygen in the presence of ascorbate. The final product was a mononuclear complex identified as [Fe(III)L'1(H2O)] with L'1 resulting from the quant. hydroxylation of L1. The complex and the oxidized ligand were characterized by EPR, NMR, and UV-visible spectroscopies and by mass spectrometry. Labeling expts. showed that with both H2O2 or O2 and ascorbate, the incorporated oxygen came from the oxidant exclusively. This reaction mimics the transformation of a tyrosine residue, brought into proximity of the active center of Ribonucleotide reductase of Escherichia coli by site-directed mutagenesis, into 3,4-dihydroxyphenylalanine.

ACCESSION NUMBER: 1998:814061 CAPLUS  
 DOCUMENT NUMBER: 130:118594  
 TITLE: O2 Activation and Aromatic Hydroxylation Performed by Diiron Complexes  
 AUTHOR(S): Menage, Stephane; Galey, Jean-Baptiste; Dumats, Jacqueline; Hussler, Georges; Seite, Michel; Luneau, Isabelle; Gautier, Chottard, Genevieve; Fontecave, Marc  
 CORPORATE SOURCE: Laboratoire de Chimie et Biochimie des Centres Redox Biologiques, DBMS-CEA Grenoble/EP 1087 CNRS/ Universite Joseph Fourier, Grenoble, 38054, Fr.  
 SOURCE: Journal of the American Chemical Society (1998), 120(51), 13370-13382  
 CODEN: JACSAT; ISSN: 0002-7863  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 19294-22-5P, Ethylenediamine N,N'-dipropionic acid diethyl ester  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (for preparation of EDTA analog polydentate ligand)  
 RN 19294-22-5 CAPLUS  
 CN β-Alanine, N,N'-1,2-ethanedilylbis-, diethyl ester (9CI) (CA INDEX NAME)



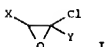
L8 ANSWER 23 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB The Michael type addition of primary amines to Me acrylate in benzene was accelerated by alumina, and monoadducts were selectively obtained in high yield. The reaction in benzene did not proceed without alumina. The yields of adducts were dependent on the structure of amines: the monoadducts were obtained in high yield (77-91% yield) when linear amines were used, and in the case of branched or bulky primary amines and secondary amines, the yields were decreased compared to the linear ones. In the addition of diamines to Me acrylate, only an amino group on 1 side of the diamines added to Me acrylate to give the monoadducts selectively, and the amino group on the another side did not react. In the addition of asym. diamine, the less hindered amino group predominantly reacted with Me acrylate.

ACCESSION NUMBER: 1998:675926 CAPLUS  
 DOCUMENT NUMBER: 130:3527  
 TITLE: Selective addition of amines to methyl acrylate in presence of alumina  
 AUTHOR(S): Suzuki, Yoshitada; Murakami, Shunsuke; Kodomari, Mitsuo  
 CORPORATE SOURCE: Department of Industrial Chemistry, Faculty of Engineering, Shibaura Institute of Technology, Minato-ku, Tokyo, 108-8548, Japan  
 SOURCE: Nippon Kagaku Kaishi (1998), (10), 664-669  
 CODEN: NKAKB8; ISSN: 0369-4577  
 PUBLISHER: Nippon Kagakkai  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Japanese  
 IT 23939-28-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (selective addition of amines to Me acrylate in presence of alumina)  
 RN 23939-28-8 CAPLUS  
 CN β-Alanine, N,N'-1,2-ethanedilylbis-, dimethyl ester (9CI) (CA INDEX NAME)



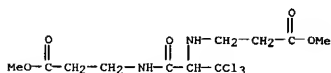
L8 ANSWER 22 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 REFERENCE COUNT: 66 THERE ARE 66 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RECORD.  
 FORMAT

L8 ANSWER 24 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 GI

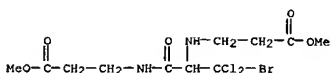


AB Reaction of propylene oxides I (X = Cl3C, Cl2CBr, ClCBr2; Y = Cl, Br) with alkyl esters of glycine, β-alanine, DL-valine, and D-phenylalanine gave trihalomethylated dipeptide diesters.

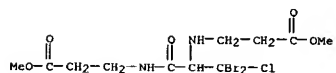
ACCESSION NUMBER: 1998:256820 CAPLUS  
 DOCUMENT NUMBER: 128:321902  
 TITLE: Pentahalopropylene oxides as synthons for polyfunctional dipeptides  
 AUTHOR(S): Galst'yan, L. Kh.; Gukasyan, N. T.; Avetisyan, A. A.  
 CORPORATE SOURCE: Yerevan Gos. Univ., Yerevan, Armenia  
 SOURCE: Khimicheskii Zhurnal Armenii (1996), 49(1-3), 117-120  
 CODEN: KZARF3  
 PUBLISHER: Izdatel'stvo Gitutyun NAN Respubliki Armenii  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 206748-65-4P 206748-66-5P 206748-67-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (pentahalopropylene oxides as synthons for polyfunctional dipeptides)  
 RN 206748-65-4 CAPLUS  
 CN β-Alanine, 3,3,3-trichloro-N-(3-methoxy-3-oxopropyl)alanyl-, methyl ester (9CI) (CA INDEX NAME)



RN 206748-66-5 CAPLUS  
 CN β-Alanine, 3-bromo-3,3-dichloro-N-(3-methoxy-3-oxopropyl)alanyl-, methyl ester (9CI) (CA INDEX NAME)



RN 206748-67-6 CAPLUS  
 CN β-Alanine, 3,3-dibromo-3-chloro-N-(3-methoxy-3-oxopropyl)alanyl-, methyl ester (9CI) (CA INDEX NAME)



AB The title products are prepared from polyalkylenepolyamines and/or polyamidoamines (optionally grafted with ethylenimine) and halogen-free crosslinking agents of specified composition. A polyamine (I) was prepared by polymerizing adipic acid with diethylenetriamine and grafting this polyamidoamine with 7.7 mol ethylenimine/basic N atom. Heating 146 g 80% aqueous I with 29 g ethylene carbonate at 110° for 3 h gave a product with viscosity 800 mPa·s. Use of this product as a dewatering, retention, and fixing aid in papermaking is exemplified.

ACCESSION NUMBER: 1997:638399 CAPLUS  
DOCUMENT NUMBER: 127:248553  
TITLE: Preparation and use of water-soluble condensation products of amines with halogen-free crosslinking agents in papermaking  
INVENTOR(S): Dyllick-Brenzinger, Rainer; Steuerle, Ulrich; Reuther,  
PATENT ASSIGNEE(S): Wolfgang; Scherr, Guenter; Meixner, Hubert  
SOURCE: BASF A.-G., Germany  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19607641	A1	19970904	DE 1996-19607641	19960229

PRIORITY APPLN. INFO.:  
IT 195456-68-9, Adipic acid-diethyl 3,3'-(ethylenediimino)propionate-diethylenetriamine-ethylenimine graft copolymer 195456-69-0  
RL: TEM (Technical or engineered material use); USES (Uses)  
(preparation and use of water-soluble condensation products of amines)

with halogen-free crosslinking agents in papermaking)

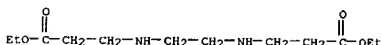
RN 195456-68-9 CAPLUS

CN β-Alanine, N,N'-1,2-ethanedilybis-, diethyl ester, polymer with N-(2-aminoethyl)-1,2-ethanediamine, aziridine and hexanedioic acid, graft (9CI) (CA INDEX NAME)

CM 1

CRN 19294-22-5

CMF C12 H24 N2 O4



CM 2

CRN 151-56-4

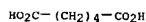
CMF C2 H5 N



CM 3

CRN 124-04-9

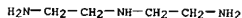
CMF C6 H10 O4



CM 4

CRN 111-40-0

CMF C4 H13 N3



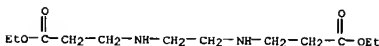
RN 195456-69-0 CAPLUS

CN β-Alanine, N,N'-1,2-ethanedilybis-, diethyl ester, polymer with aziridine (9CI) (CA INDEX NAME)

CM 1

CRN 19294-22-5

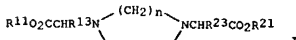
CMF C12 H24 N2 O4



CM 2

CRN 151-56-4

CMF C2 H5 N



AB R11O2CCHR13N(CH2)2NR22CHR2CO2R21 [R1, R2 = side chain of amino acid other than glycine or (hydroxy)proline; R11, R21 = H, protecting group; R12 = R22 = H; R1R12 (and R2R22) may form (hydroxy)proline ring] or their salts, useful as chiral stationary phases in column chromatog., chiral ligands for metals, clathrate components, and physiol. active substances (no data) are prepared by treatment of R12NCHR1CO2R11 (or their salts)

and

R22NCHR2CO2R21 (or their salts) (R1, R11, R12, R2, R21, R22 = same as above) with glyoxal in the presence of reducing agents. N,N,N',N'-dialkylenebis(α-amino acids) I [R13, R23 = side chain of amino acid other than glycine or (hydroxy)proline; R11, R21 = same as above; n = 1-3] or their salts are prepared similarly from R11O2CCHR13N(CH2)2NCHR23CO2R21 (R11, R13, R21, R23, n = same as above). L-Phe-OMe.HCl was treated with aqueous glyoxal solution and Na cyanoborohydride

in MeOH at room temperature for 10 h to give 80% N,N'-monoethylenebis(L-phenylalanine) di-Me ester.

ACCESSION NUMBER: 1997:509114 CAPLUS  
DOCUMENT NUMBER: 127:162120  
TITLE: Preparation of N,N'-ethylenebis(α-amino acids) from α-amino acids and glyoxal  
INVENTOR(S): Kojima, Yoshitane; Yamashita, Tetsushi  
PATENT ASSIGNEE(S): Lederle (Japan) Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09194447	A2	19970729	JP 1996-22936	19960117

PRIORITY APPLN. INFO.:  
JP 1996-22936

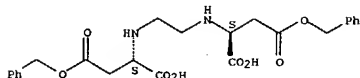
OTHER SOURCE(S): CASREACT 127:162120; MARPAT 127:162120

IT 193764-72-6P  
RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of N,N'-ethylenebis(α-amino acids) from α-amino acids and glyoxal)

RN 193764-72-6 CAPLUS

CN L-Aspartic acid, N,N'-1,2-ethanedilybis-, 4,4'-bis(phenylmethyl) ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● 2 HCl

L8 ANSWER 28 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Amino acids or salts comprising at least two nitrogen groups and at least one carboxylic acid group were prepared from carboxy-protected derivs. Thus, (S,S)-ethylenediaminedisuccinic acid was obtained from its tetra-Me ester by treatment with NaOH in water for several hours, followed by neutralization with HCl.

ACCESSION NUMBER: 1997:67114 CAPLUS  
 DOCUMENT NUMBER: 126:75241  
 TITLE: Preparation of ethylenediaminedisuccinic acid by deprotection  
 INVENTOR(S): Cowton, Elizabeth Lucy Mary; Bassett, Derek Anthony  
 PATENT ASSIGNEE(S): Associated Octel Company Limited, UK  
 SOURCE: Brit. UK Pat. Appl., 29 pp.  
 CODEN: BAXXDU  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2299809	A1	19961016	GB 1996-7694	19960412
GB 2299809	B2	19981028		

PRIORITY APPLN. INFO.: GB 1995-7661 19950413

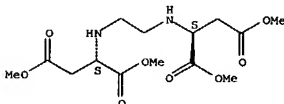
OTHER SOURCE(S): MARPAT 126:75241

IT 185514-39-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of ethylenediaminedisuccinic acid by deprotection)

RN 185514-39-0 CAPLUS

CN L-Aspartic acid, N,N'-1,2-ethanedilylbis-, tetramethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L8 ANSWER 27 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN

AB A review, with 23 refs., of biodegradable environmentally acceptable alternatives to EDTA as chelating agents (based on naturally occurring amino acids) in photog. bleaching compns., especially to replace the ferric

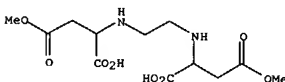
chelate of EDTA, which is not biodegradable. Three essential factors were required for such post-EDTA compds.: chelating ability equal to that of EDTA, practical biodegradability, and reasonable production costs. In addition, the interactions of the new chelating agents in detergent compns. were discussed, with respect to the biodegradability in the presence of detergent (builder) components.

ACCESSION NUMBER: 1997:196456 CAPLUS  
 DOCUMENT NUMBER: 126:299548  
 TITLE: Design of Post-EDTA biodegradable chelating agents  
 AUTHOR(S): Yamamoto, Hirotaka  
 CORPORATE SOURCE: Central Res. Lab., Nitto Chem. Industry Co., Ltd, Yokohama, 230, Japan  
 SOURCE: Nippon Shashin Gakkaishi (1997), 60(1), 5-11  
 CODEN: NSGKAP; ISSN: 0369-5662  
 PUBLISHER: Nippon Shashin Gakkai  
 DOCUMENT TYPE: Journal: General Review  
 LANGUAGE: Japanese

IT 56972-55-5  
 RL: NUU (Other use, unclassified); USES (Uses)  
 (compns. containing; biodegradable alternatives to EDTA chelating agents in photog. bleaching compns.)

RN 56972-55-5 CAPLUS

CN Aspartic acid, N,N'-1,2-ethanedilylbis-, 4,4'-dimethyl ester (9CI) (CA INDEX NAME)



L8 ANSWER 29 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN

AB Microbicial copolymers of polyepoxy compds. and polyamines, whose N atoms are (partially) modified with 0.1-15% methylenecarboxylic acid and/or ethylenecarboxylic acid group bonded with microbicial metal ions, are claimed. The copolymers gradually release trace amount of metal ions in water, thus showing long-lasting microbicial effect.

ACCESSION NUMBER: 1995:884469 CAPLUS  
 DOCUMENT NUMBER: 123:321634  
 TITLE: Microbicial polyamine-epoxy resins for water purification  
 INVENTOR(S): Moriya, Masafumi; Matsumoto, Akiteru; Hosoda, Kazuo; Yoshida, Masatoshi; Ogawa, Takashi; Shimizu, Takeshi; Kitani, Kazumi  
 PATENT ASSIGNEE(S): Myoshi Yushi Kk, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07196792	A2	19950801	JP 1993-354062	19931229
JP 3443149	B2	20030902		

PRIORITY APPLN. INFO.: JP 1993-354062 19931229

IT 170589-49-8DP, hydrolyzed, silver salt

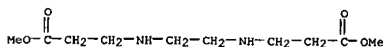
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (microbicial metal carboxylate-containing polyamine-epoxy resins for water purification)

RN 170589-49-8 CAPLUS

CN β-Alanine, N,N'-1,2-ethanedilylbis-, dimethyl ester, polymer with 1,3-benzenedimethanamine and 2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis(oxirane) (9CI) (CA INDEX NAME)

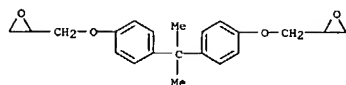
CM 1

CRN 23939-28-8  
 CMF C10 H20 N2 O4



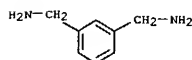
CM 2

CRN 1675-54-3  
 CMF C21 H24 O4



CH 3

CRN 1477-55-0  
CMF C8 H12 N2



AB The reactions of 3-acetoxy-3-aryl-2-methylenepropionitriles  $\text{AcOCHRC}(\text{:CH}_2)\text{CN}$  [I, R = (un)substituted Ph] with ammonia yielded the corresponding diallylamines  $\text{Z,Z-RCH:C}(\text{CN})\text{CH}_2\text{NHCH}_2\text{C}(\text{CN})\text{:CHR}$ . The reaction of I with a primary allylamine or with ethylenediamine gave diallylamines, e.g.,  $\text{Z,Z-PhCHC}(\text{CN})\text{CH}_2\text{NHCH}_2\text{CH}_2\text{NHC}(\text{CN})\text{:CHPh}$ . The treatment of Me 3-acetoxy-3-aryl-2-methylenepropionates  $\text{AcOCHRC}(\text{:CH}_2)\text{CO}_2\text{Me}$  [II, R = (un)substituted Ph, 2-thienyl] with isopropylamine or ethylenediamine gave allylamines, e.g.  $\text{E,E-RCH:C}(\text{CO}_2\text{Me})\text{CH}_2\text{N}(\text{CHMe}_2)\text{CH}_2\text{C}(\text{CO}_2\text{Me})\text{:CHR}$ , but the reaction of II with ammonia gave only the triallylamines  $\text{E,E,E-[RCH:C}(\text{CO}_2\text{Me})\text{CH}_2\text{]}_3\text{N}$  in good yields.

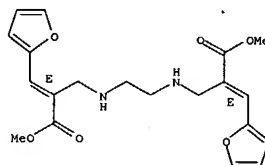
ACCESSION NUMBER: 1995:26724 CAPLUS  
DOCUMENT NUMBER: 123:32333

TITLE: Synthesis of diallylamines and triallylamines from 3-acetoxy-3-aryl-methylenepropionitriles and methyl 3-acetoxy-3-aryl-2-methylenepropionates  
AUTHOR(S): Akasira, Mohamed; El Guemout, Farid; Bauchat, Patrick; Foucaud, Andre  
CORPORATE SOURCE: Fac. Sci. Tetouan, Univ. Rennes, Rennes, 35042, Fr.  
SOURCE: Canadian Journal of Chemistry (1994), 72(5), 1357-61  
CODEN: CJCHAG; ISSN: 0008-4042  
DOCUMENT TYPE: Journal  
LANGUAGE: French  
OTHER SOURCE(S): CASREACT 123:32333

IT 164208-72-4P 164208-73-5P  
RL: SPN (Synthetic preparation); PREP (Preparation)

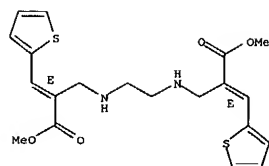
RN 164208-72-4 CAPLUS  
CN 2-Propenoic acid, 2,2'-[1,2-ethanediylbis(iminomethylene)]bis[3-(2-furanyl)-, dimethyl ester, (E,E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 164208-73-5 CAPLUS  
CN 2-Propenoic acid, 2,2'-[1,2-ethanediylbis(iminomethylene)]bis[3-(2-thienyl)-, dimethyl ester, (E,E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



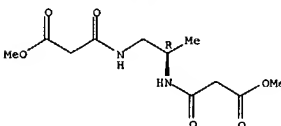
AB Selective aminolysis of diesters is catalyzed by Candida antarctica lipase. Using this enzymic reaction  $\text{N,N'}$ -polymethylenesuccinimides and  $\text{N,N'}$ -polymethyleneglutarimides can be obtained. When propane-1,2-diamine is used as the nucleophile, the enzyme catalyzes the aminolysis of diesters with very good enantioselectivity.

ACCESSION NUMBER: 1994:456978 CAPLUS  
DOCUMENT NUMBER: 121:56978  
TITLE: Enzymic aminolysis of non-activated diesters with diamines  
AUTHOR(S): Astorga, Covadonga; Rebollo, Francisca; Gotor, Vicente  
CORPORATE SOURCE: Fac. Quim., Univ. Oviedo, Oviedo, 33071, Spain  
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1972-1999) (1994), (7), 829-32  
CODEN: JCPRB4; ISSN: 0300-922X  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 121:56978

IT 156331-21-4P  
RL: SPN (Synthetic preparation); PREP (Preparation)

RN 156331-21-4 CAPLUS  
CN Propanoic acid, 3,3'-[1,2-ethanediyl]diimino]bis[3-oxo-, dimethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).





L8 ANSWER 32 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Radiopharmaceuticals consisting essentially of a lipophilic, charge neutral radionuclide complex of a diaminedithiol ligand having 1-4 ester groups of the -A-COOR (A = Cl-10 alkylene, R = Cl-10 alkyl) are prepared for radioimaging brain perfusion in primates. Technetium-99m is a preferred radionuclide. Thus N,N'-1,2-ethylenedithiolbis-L-cysteine (I) (preparation is given) in EtOH was refluxed with HCl gas for 2.5 h, then slurry was cooled, filtered and purified to obtain I.2Et ester 2HCl (II). II and SnCl2 and 99mTcO4 were mixed to obtain 99mTc diaminedithiol complex of the invention. Different 99mTc diaminedithiol complexes were used for evaluation of regional cerebral blood flow by performing brain imaging studies in monkeys.

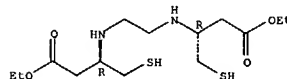
ACCESSION NUMBER: 1994:264828 CAPLUS  
DOCUMENT NUMBER: 120:264828  
TITLE: Ester-substituted diaminedithiols and radiolabeled complexes thereof for radio-imaging brain  
INVENTOR(S): Bergstein, Paul L.; Cheesman, Edward H.; Watson, Alan D.  
PATENT ASSIGNEE(S): Du Pont Merck Pharmaceutical Co., USA  
SOURCE: U.S., 13 pp. Cont.-in-part of U.S. Ser. No. 16,982, abandoned.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5279811	A	19940118	US 1988-143561	19880126
AU 8811748	A1	19880901	AU 1988-11748	19880216
AU 614276	B2	19910829		
DK 8600816	A	19880819	DK 1988-816	19880217
DK 175089	B1	20040524		
EP 279417	A2	19880824	EP 1988-102252	19880217
EP 279417	A3	19890726		
EP 279417	B1	19920520		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AT 76401	E	19920615	AT 1988-102252	19880217
ES 2042609	F3	19931216	ES 1988-102252	19880217
JP 63295549	A2	19881201	JP 1988-34137	19880218
ZA 8801136	A	19891025	ZA 1988-1136	19880218
CA 1271195	A1	19900703	CA 1988-559230	19880218
US 5431900	A	19950711	US 1993-139894	19931020
PRIORITY APPLN. INFO.:			US 1987-16982	B2 19870218
			US 1988-143561	A 19880126
			EP 1988-102252	A 19880217

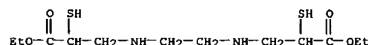
OTHER SOURCE(S): MARPAT 120:264828  
IT 154147-85-ODP, complexes with radioisotopes 154147-90-TDP, complexes with radioisotopes  
RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of, for radioimaging brain)  
RN 154147-85-0 CAPLUS

L8 ANSWER 32 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
CN Butanoic acid, 3,3'-(1,2-ethanediylidimino)bis[4-mercapto-, diethyl ester, (3R,3'A)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 154147-90-7 CAPLUS  
CN Propanoic acid, 3,3'-(1,2-ethanediylidimino)bis[2-mercapto-, diethyl ester (9CI) (CA INDEX NAME)



L8 ANSWER 33 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
AB The title compds. comprise a mixture of straight and branched perfluoroalkyl groups bonded to Cl, Br, or I through a F-free alkylene group. Perfluorodecyltetrahydroiodide (prepared from perfluorosulfonyl fluoride, 40% straight and 60% branched, treated first with I, then with C2H4) was derivatized to thiol functionality by treatment with thiourea in EtOH to give perfluorodecyltetrahydrothiol (I). I was added to a reaction mixture

containing hexamethoxymethylmelamine to give a I-melamine condensate (II), 1:4 mol ratio). A 50/50 polyester/cotton fabric blend was treated with an emulsion of II at 0.3%, dried and cured at 150°, to give a fabric with oil resistance (AATCC 118-1975) 5 and 5 after 1 dry cleaning, vs. 3 and 2, resp., for a precursor perfluorodecyltetrahydroiodide having all straight chain perfluoroalkyl groups.

ACCESSION NUMBER: 1994:136059 CAPLUS  
DOCUMENT NUMBER: 120:136059  
TITLE: Perfluoroalkyl halides and derivatives as precursors for oil and water repellants and surfactants  
INVENTOR(S): Behr, Frederick E.; Dams, Rudolf J.; DeWitte, Johan E.; Hagen, Donald F.  
PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co., USA  
SOURCE: Can. Pat. Appl., 67 pp.  
CODEN: CPXXEB  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 3  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2071596	AA	19930111	CA 1992-2071596	19920618
EP 526976	A1	19930210	EP 1992-305710	19920622
EP 526976	B1	19970115		
R: BE, CH, DE, FR, GB, IT, LI, NL				
JP 05345732	A2	19931227	JP 1992-183345	19920710
JP 3231844	B2	20011126		
JP 2002138078	A2	20020514	JP 2001-204928	19920710
PRIORITY APPLN. INFO.:			US 1991-728184	A 19910710
			JP 1992-183345	A3 19920710

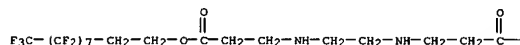
OTHER SOURCE(S): MARPAT 120:136059  
IT 150953-94-9P  
RL: PREP (Preparation) (linear and branched, preparation of, for surfactants)  
RN 150953-94-9 CAPLUS  
CN 3,14-Dioxo-7,10-diazatetracontan-1-aminium, N-ethyl-17,17,18,18,19,19,20,20,21,21,22,22,23,23,24,24,24-heptafluoro-N,N-dimethyl-4,13-dioxo-, ethyl sulfate (9CI) (CA INDEX NAME)

CM 1

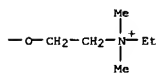
CRN 150953-93-8  
CMF C24 H33 F17 N3 O4

L8 ANSWER 33 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B



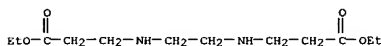
CH 2

CRN 48028-76-8  
CMF C2 H5 O4 S

Et-O-SO3-

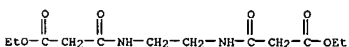
L8 ANSWER 34 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
AB The addition reaction of CH<sub>2</sub>:CHCO<sub>2</sub>Et with H<sub>2</sub>N(CH<sub>2</sub>)<sub>n</sub>NH<sub>2</sub> (n = 2-4)  
followed by  
acid hydrolysis of the intermediate esters gave  
HO<sub>2</sub>CCH<sub>2</sub>CH<sub>2</sub>NH(CH<sub>2</sub>)<sub>n</sub>NHCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H (R = H, CH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H). The procedure was  
simpler compared to the cyanoethylation-hydrolysis route and afforded  
better yields.

ACCESSION NUMBER: 1993:212736 CAPLUS  
DOCUMENT NUMBER: 118:212736  
TITLE: Preparation of spermic acid and related compounds  
AUTHOR(S): Ioannou, Panayiotis V.  
CORPORATE SOURCE: Dep. Chem., Univ. Patras, Patras, Greece  
SOURCE: Chimika Chronika (1991), 20(3-4), 85-93  
CODEN: CMCRZ; ISSN: 0366-693X  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 118:212736  
IT 147416-88-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and ester hydrolysis of)  
RN 147416-88-4 CAPLUS  
CN β-Alanine, N,N'-1,2-ethanediylbis-, diethyl ester, dihydrochloride  
(9CI) (CA INDEX NAME)

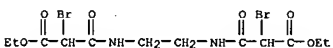


● 2 HCl

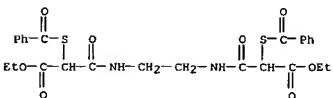
L8 ANSWER 35 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
RN 13001-79-1 CAPLUS  
CN Propanoic acid, 3,3'-(1,2-ethanediylidimino)bis[3-oxo-, diethyl ester  
(9CI) (CA INDEX NAME)



IT 146725-69-1P, Diethyl 2,9-dibromo-3,8-dioxo-4,7-diazadecanedioate  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and reaction of, with sodium thiobenzoate)  
RN 146725-69-1 CAPLUS  
CN Propanoic acid, 3,3'-(1,2-ethanediylidimino)bis[2-bromo-3-oxo-, diethyl  
ester (9CI) (CA INDEX NAME)



IT 146725-70-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and reaction of, with technetate ethanediolate oxo  
complex)  
RN 146725-70-4 CAPLUS  
CN Propanoic acid, 3,3'-(1,2-ethanediylidimino)bis[2-(benzoylthio)-3-oxo-,  
diethyl ester (9CI) (CA INDEX NAME)



L8 ANSWER 35 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Diamide dimercaptide (N2S2) ligands  
PhC(O)SCH(R)CONHCH<sub>2</sub>CH<sub>2</sub>NHCOCH<sub>2</sub>(R)CHSC(O)  
Ph (4, 8, R = CH<sub>2</sub>COOMe, COOEt, resp.) and  
PhC(O)SCH(COOMe)CH<sub>2</sub>CONHCH<sub>2</sub>CH<sub>2</sub>NH  
COCH<sub>2</sub>CH(COOMe)SC(O)Ph (5) were synthesized and evaluated as potential  
renal radiopharmaceuticals. The target compds. were prepared in modest  
overall yields of 22%, 20%, and 19%, for 4, 8, and 5 resp., using  
readily available starting materials. Following in situ deprotection, 99mTc  
complexes of high radiochem. purity were obtained and are stable for  
56 h. AsPh<sub>4</sub>[<sup>99</sup>TcO(L8)] [1, H<sub>4</sub>L8 = HSCH(COOEt)CONHCH<sub>2</sub>CH<sub>2</sub>NHCOCH(COOEt)  
t)SH] was isolated. X-ray crystallog. data for 1 (monoclinic, space  
group P2<sub>1</sub>/n, Z = 4, R = 0.0645 and R<sub>w</sub> = 0.0663) show that the Tc is bound to  
both thiolate S atoms and to 2 deprotonated amide N atoms. The  
coordination geometry about the Tc is square-pyramidal with an oxo ligand  
in the apical position. The Tc-N bond distances (2.002(12) and 1.984(12)  
Å), the Tc-S bond distances (2.300(5) and 2.286(5) Å), and the  
Tc-O bond distance (1.667(11) Å) are in good agreement with bond  
lengths reported for similar complexes. The carboxylate groups are not  
bonded to the Tc atom in the solid state, nor in CDCl<sub>3</sub> solution, as  
evidenced by x-ray crystal data and solution NMR data, resp. In the solid state,  
1 is monoanionic, therefore, at physiol. pH, [<sup>99</sup>mTcO(L8)] is presumably  
trianionic. Biodistribution studies performed in rats with the 99mTc  
complexes revealed slow blood clearance and high muscle uptake for these  
agents. Modest hepatobiliary excretion was observed, and low quantities  
of the complexes were found in the heart, lungs, and spleen after 1 h. The  
urinary excretion of the 99mTc complexes of ligands 4, 5, and 8 is slow  
when compared to the excretion of [<sup>131</sup>I]OIH in rats (22%, 22%, and 32%  
vs. 85-86%, resp.). Protein binding of 99mTc complexes of ligands 4, 5, and  
8 in both rat and monkey plasma is similar to MAG3. Preliminary planar  
imaging studies in monkeys revealed slow renal excretion for these  
agents. The evaluated 99mTc complexes are poor candidates as renal  
radiopharmaceuticals.  
ACCESSION NUMBER: 1993:204047 CAPLUS  
DOCUMENT NUMBER: 118:204047  
TITLE: Dicarboxylate diamide dimercaptide (N2S2)  
technetium-99m complexes: Synthesis and biological  
evaluation as potential renal radiopharmaceuticals  
AUTHOR(S): Canney, Daniel J.; Billings, Jeffrey; Francesconi,  
Lynn C.; Guo, Yu Zhi; Haggerty, Brian S.; Rheingold,  
Arnold L.; Kung, Hank F.  
CORPORATE SOURCE: Dep. Radiol., Univ. Pennsylvania, Philadelphia, PA,  
19104, USA  
SOURCE: Journal of Medicinal Chemistry (1993), 36(8), 1032-40  
CODEN: JMCHMR; ISSN: 0022-2623  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 13001-79-1P, Diethyl 3,8-dioxo-4,7-diazadecanedioate  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and bromination of, with bromosuccinimide and  
hydrobromic acid)

L8 ANSWER 36 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
AB The title compns. useful as building sealants contain (A) polymers having  
OH or hydrolyzable groups on both ends and comprising main chain  
-NH[CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CO(R1O)NCOCH<sub>2</sub>CH<sub>2</sub>NH]mCH<sub>2</sub>CH<sub>2</sub>CO(R1O)NCOCH<sub>2</sub>CH<sub>2</sub>NH- [R1 =  
C2-4 hydrocarbylene; R2 = H, Me; Z = C1-20 (un)substituted  
hydrocarbylene,  
C1-20 divalent group containing ether, ester or NH group, -  
R5R4R3SiO(R3R4SiO)15R3R4R5-; R3, R4 = C1-6 (un)substituted hydrocarbyl;  
R5 = C1-6 hydrocarbylene optionally containing NH group; 1 = 0-50; m =  
1-5; n  
= 20-200] and end groups XaYbSiR7R63-(a+b) [R6 = (un)substituted  
hydrocarbyl; R7 = C1-15 divalent group optionally containing NH group; X  
= OH;  
Y = hydrolyzable group; a, b = 0-3; (a + b) = 1-3], (B) 1-20 parts  
organosilane R84-cSiQc [R8 = C1-8 (un)substituted hydrocarbyl; Q =  
hydrolyzable group; c = 3, 4] or hydrolyzate, and (C) 0-5 parts curing  
catalyst. A sealant comprised  
(MeO)3SiC3H6NHCH<sub>2</sub>CHMeCO<sub>2</sub>(CH<sub>2</sub>CHMeO)80COCHMeC  
H<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>NHCH<sub>2</sub>CHMeCO<sub>2</sub>(CH<sub>2</sub>CHMeO)80COCHMeCCH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>Si(OMe)3 80, DOP 20, and  
CaCO<sub>3</sub> 100, MeSi(OMe)3 5, dibutyltin dilaurate 2, γ-  
guanidylpropyltrimethoxysilane 1, and aminopropyltrimethoxysilane 1 part.

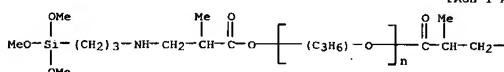
ACCESSION NUMBER: 1993:83015 CAPLUS  
DOCUMENT NUMBER: 118:83015  
TITLE: Silicone compositions curable at room temperature by  
moisture and cured products  
INVENTOR(S): Inoue, Yoshio  
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

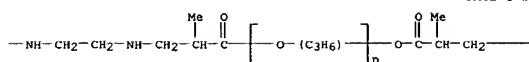
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04170432	A2	19920618	JP 1990-298045	19901102
JP 2529022	B2	19960828		

PRIORITY APPLN. INFO.: JP 1990-298045 19901102

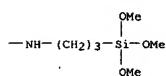
IT 145898-59-5P 145927-13-5P  
RL: PREP (Preparation)  
(manufacture of, for sealants curable at room temperature by moisture)  
RN 145898-59-5 CAPLUS  
CN Poly[oxy(methyl-1,2-ethanediyl)], α,α'-[1,2-  
ethanediylbis[imino(2-methyl-1-oxo-3,1-propanediyl)]]bis[α-[2-methyl-  
1-oxo-3-[(3-(trimethoxysilyl)propyl)amino]propoxyl]- (9CI) (CA INDEX  
NAME)

PAGE 1-A



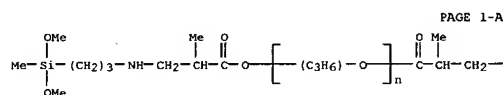


PAGE 1-B

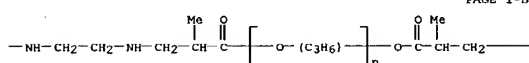


PAGE 1-C

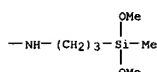
RN 145927-13-5 CAPLUS  
CN Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha,\alpha'$ -(1,2-ethanediylbis[imino(2-methyl-1-oxo-3,1-propanediyl)]bis[ $\omega$ -[3-[(3-dimethoxymethylsilyl)propyl]amino]-2-methyl-1-oxopropoxy]- (9CI) (CA INDEX NAME)



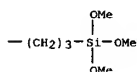
PAGE 1-A



PAGE 1-B



PAGE 1-C



PAGE 1-C

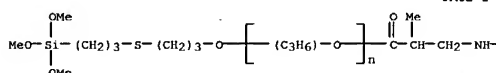
AB The title compns. comprise (A) polymers having terminated OH groups or hydrolyzable groups 100, (B) organosilanes or their partial hydrolyzates 1-20, and (C) curing catalysts 0-5 parts. Refluxing 447 g polyoxypropylene allyl ether methacrylate in 300 g PhMe for 1 h, heating with 3.0 g H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub> at 100° for 3 h then with 19.6 g HSCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>Si(OMe)<sub>3</sub> and N,N-bis(isobutyronitrile) at 100-110° for 3 h gave a polymer with viscosity 12,000 cS and both ends capped with Si(OMe)<sub>3</sub> groups. Roll mixing the polymer 800, dioctyl phthalate 200, and CaCO<sub>3</sub> 1000 g, kneading (200 g) with MeSi(OMe)<sub>3</sub> 5, Bu<sub>2</sub>Sn dilaurate 1,  $\gamma$ -aminopropyltriethoxysilane 1, and  $\alpha$ -guanidylpropyltrimethoxysilane 1 g, forming into a 2-mm sheet, and curing 7 days at 20° and 60% relative humidity resulted in test piece with elongation 500%, 50% modulus 3.0 kg/cm<sup>2</sup>, and JIS-A hardness 25.

ACCESSION NUMBER: 1992:613759 CAPLUS  
DOCUMENT NUMBER: 117:213759  
TITLE: Room-temperature-curable resin compositions for construction sealing materials  
INVENTOR(S): Inoue, Yoshio  
PATENT ASSIGNEE(S): Shin-Etsu Kagaku Kogyo K. K., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKKXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

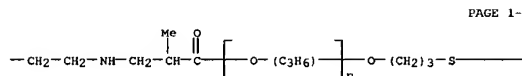
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04089860	A2	19920324	JP 1990-205382	19900802
JP 2553233	B2	19961113		

PRIORITY APPLN. INFO.: JP 1990-205382 19900802

IT 144233-53-4  
RL: USES (Uses)  
(room-temperature-curable compns., for construction sealing materials)  
RN 144233-53-4 CAPLUS  
CN Poly[oxy(methyl-1,2-ethanediyl)],  $\alpha,\alpha'$ -(1,2-ethanediylbis[imino(2-methyl-1-oxo-3,1-propanediyl)]bis[ $\omega$ -[3-[(3-trimethoxysilyl)propyl]thio]propoxy]- (9CI) (CA INDEX NAME)



PAGE 1-A



PAGE 1-B

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB XYZQ [X = R<sub>3</sub>(CH<sub>2</sub>)<sub>n</sub>CR<sub>1</sub>R<sub>2</sub>CR<sub>4</sub>R<sub>5</sub>, (indole ring substituted) Q1; R<sub>1</sub> = H, OH, halo, alkyl, alkoxy, haloalkyl, alkanoyl, alkoxy-carbonyl, aminocarbonyl, cyano, (acylamino, etc); R<sub>2</sub> = H, alkyl; R<sub>3</sub> = bicyclic carbocyclyl, heterocyclyl; R<sub>4</sub>, R<sub>5</sub> = H; or R<sub>4</sub>R<sub>5</sub> = O, n = 1, 2; Y = R<sub>1</sub>OHn(CH<sub>2</sub>)<sub>n</sub>CH(NR<sub>9</sub>)CR<sub>11</sub>R<sub>12</sub>, R<sub>13</sub>NCOA(CH<sub>2</sub>)<sub>4</sub>CH(NR<sub>9</sub>)CR<sub>11</sub>R<sub>12</sub>; R<sub>9</sub> = H, alkyl; R<sub>10</sub> = C(=O)NHR<sub>13</sub>, CO(CH<sub>2</sub>)<sub>2</sub>PR<sub>14</sub>, etc.; G = O, S, p = 0, 1, 2; R<sub>13</sub> = (cyclo)alkyl, alkenyl, mono- or bicyclic heterocyclyl, etc.; R<sub>14</sub> = cycloalkyl, mono- or bicyclic heterocyclyl, (substituted) aryl; R<sub>11</sub>, R<sub>12</sub> = H; or R<sub>11</sub>R<sub>12</sub> = O; A = O, CH<sub>2</sub>; Z = R<sub>17</sub>(CH<sub>2</sub>)<sub>r</sub>CH(NR<sub>16</sub>)U; U = CO, CH<sub>2</sub>, CH<sub>2</sub>CO; r = 1 when U = CO, CH<sub>2</sub>; r = 0 when U = CH<sub>2</sub>CO; R<sub>16</sub> = H, alkyl; R<sub>17</sub> (prodrug ester of) CO<sub>2</sub>H; Q = NR<sub>2</sub>CR<sub>24</sub>R<sub>26</sub>(CH<sub>2</sub>)<sub>s</sub>R<sub>25</sub>; s = 1, 2; R<sub>23</sub> = H, alkyl; R<sub>24</sub> = H, Me; or R<sub>23</sub>R<sub>24</sub> =

(CH<sub>2</sub>)<sub>3</sub>; R<sub>25</sub> = aryl, mono- or bicyclic heterocyclyl, cycloalkyl; R<sub>26</sub> = (substituted) carbamoyl were prepared Thus, title peptide I, prepared by solution phase methods, inhibited feeding in rats with ED<sub>50</sub> = 1.3 nmole/kg

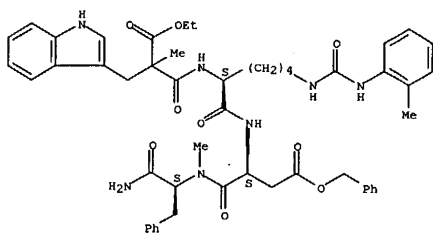
1-p.  
ACCESSION NUMBER: 1992:408489 CAPLUS  
DOCUMENT NUMBER: 117:8489  
TITLE: Preparation of tetrapeptide cholecystokinin agonists  
INVENTOR(S): Shiosaki, Kazumi; Nadzan, Alex M.; Kopecka, Hana; Shue, Youe Kona; Holladay, Mark W.; Lin, Chun W.; Nellans, Hugh N.  
PATENT ASSIGNEE(S): Abbott Laboratories, USA  
SOURCE: PCT Int. Appl., 216 pp.  
CODEN: FIKXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9119733	A1	19911126	WO 1991-US4458	19910620
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
US 5270302	A	19931214	US 1991-713010	19910617
PRIORITY APPLN. INFO.: US 1990-541230			US 1990-541230	19900620
			US 1991-713010	19910614
			US 1988-287955	19881221
			WO 1989-US5673	19891218

OTHER SOURCE(S): MARPAT 117:8489  
IT 141408-08-4P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, as cholecystokinin agonist)  
RN 141408-08-4 CAPLUS  
CN L-Phenylalaninamide, N<sub>2</sub>-[3-ethoxy-2-(1H-indol-3-ylmethyl)-2-methyl-1,3-

L8 ANSWER 38 OF 64 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)  
 dioxopropyl]-N6-[[[2-methylphenyl]amino]carbonyl]-L-lysyl-L- $\alpha$ -  
 aspartyl-N $\alpha$ -methyl-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L8 ANSWER 39 OF 64 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB The title compound HO2CCH2CH(CO2H)NHCOC2NH2(CO2H)CH2CO2H (I) and its  
 salts

are useful as chelating and sequestering agents in detergents and  
 bleaching compns. I is prepared by the reaction of  
 HO2CCH2CH(CO2H)NHCOC2NH2 with Me H maleate in water at alkaline pH  
 followed  
 by hydrolysis of ester groups or by the reaction of aspartic acid with a  
 glyoxal derivative such as glyoxal sulfite.

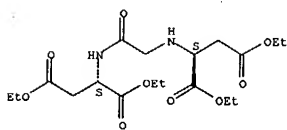
ACCESSION NUMBER: 1991:209605 CAPLUS  
 DOCUMENT NUMBER: 114:209605  
 TITLE: N,N'-(1-Oxo-1,2-ethanediyl)bis(aspartic acid), salts,  
 and use in detergent compositions  
 Glogowski, Mark W.; Hartman, Frederick A.; Heinzman,  
 Stephen W.; Perkins, Christopher M.  
 PATENT ASSIGNEE(S): Procter and Gamble Co., USA  
 SOURCE: U.S., 18 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4983315	A	19910108	US 1989-392168	19890810
EP 412697	A2	19910213	EP 1990-308312	19900730
EP 412697	A3	19911030		
EP 412697	B1	19951018		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
ES 2078313	T3	19951216	ES 1990-308312	19900730
CA 2022874	AA	19910211	CA 1990-2022874	19900808
CA 2022874	C	19970204		
AU 9060869	A1	19910214	AU 1990-60869	19900809
AU 648260	B2	19940421		
CN 1051171	A	19910508	CN 1990-107779	19900810
CN 1030193	B	19951101		
JP 03173857	A2	19910729	JP 1990-213604	19900810
JP 2749436	B2	19980513		
BR 9003950	A	19910903	BR 1990-3950	19900810
IN 177747	A	19970215	IN 1990-DE833	19900820
CN 1101072	A	19950405	CN 1994-105137	19940520
PRIORITY APPLN. INFO.:			US 1989-392168	A 19890810

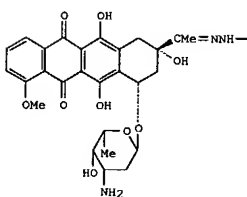
OTHER SOURCE(S): MARPAT 114:209605  
 IT 133677-58-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and hydrolysis of)  
 RN 133677-58-4 CAPLUS  
 CN L-Aspartic acid, N-[N-(3-ethoxy-1-(ethoxycarbonyl)-3-oxopropyl)glycyl]-,  
 diethyl ester, (S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L8 ANSWER 39 OF 64 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)

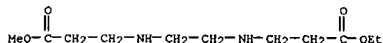


L8 ANSWER 40 OF 64 CAPLUS COPYRIGHT 2004 ACS ON STN  
 GI

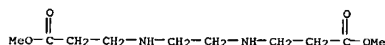


AB A series of bisanthracycline hydrazones were prepared,  
 QCO(CH2)m(NR(CH2)n)kNR(CH2)mCOQ (I, R = H) (k = 1 or 2; m = 1 or 2, n =  
 2-6  
 for all compds.) containing either 2 or 3 secondary amines in the linker  
 chain  
 as well as the corresponding acetyl (I, R = Ac), or benzoyl (I, R = Bz)  
 protected derivs. I (R = H) could not be isolated in pure form as they  
 decomposed during semipreparative HPLC. I (R = Ac) and I (R = Bz, k = m  
 = n  
 = 2) were characterized by fast atom bombardment mass spectrometry. All  
 compds. bis-intercalated into DNA as judged by viscometriclengthening of  
 DNA and by decreased dissociation kinetics from DNA under conditions of  
 SDS  
 sequestration. I (R = H) exhibited dissociation rates less than 10-5  
 that of  
 daunomycin. The apparent affinity of these compds. was so great that the  
 dissociation consts. could not be quantitated, and they were only  
 relayed from  
 DNA to monomeric species by a slow hydrolysis process of the hydrazone  
 links. Protection of those derivs. containing 2 amines in the linker by  
 acetyl and benzoyl groups, decreased the dissociation time constant to  
 490-2900  
 s (1400-8000 fold slower than daunomycin) with maximal DNA residence time  
 corresponding to a linker length of 14 atoms (approx. 14 Å). Addition of  
 a third protected amine in the linker, I (R = Ac, k = m = n = 2),  
 enhanced  
 the DNA residence time a further 3-fold. In vitro inhibition of  
 transcription anal. showed that all of the bis-anthracyclines exhibited a  
 DNA sequence specificity for 5'-CpA-3' sites, with adjacent intercalation  
 sites decreasing in the order CA > AC, TC > CT > GC, CG, CC, TA, and it  
 is  
 apparent that the presence of the basic amino functions in the bridging  
 chain provides for greatly enhanced formation of the drug-DNA complex.  
 ACCESSION NUMBER: 1990:91218 CAPLUS  
 DOCUMENT NUMBER: 112:91218  
 TITLE: Synthesis of polyamine-linked bis-daunomycin  
 hydrazones and their interaction with DNA

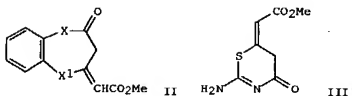
L8 ANSWER 40 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 AUTHOR(S): Hook, R. J.; Phillips, D. R.; Reiss, J. A.  
 CORPORATE SOURCE: Dep. Chem., La Trobe Univ., Bundoora, 3083, Australia  
 SOURCE: Anti-Cancer Drug Design (1989), 4(3), 173-90  
 CODEN: ACCDEA; ISSN: 0266-9536  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 125459-51-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and acylation or hydrazinolysis of)  
 RN 125459-51-0 CAPLUS  
 CN  $\beta$ -Alanine, N-[2-[(3-ethoxy-3-oxopropyl)amino]ethyl]-, methyl ester (9CI) (CA INDEX NAME)



L8 ANSWER 41 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB The elimination kinetics of BuNMeCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>R [I; R = OMe (II), NH<sub>2</sub> (III)], determined in MeOH at room temperature using n-C<sub>18</sub>H<sub>37</sub>NHMe as a trapping agent for the product CH<sub>2</sub>:CHCOR, showed that the II reaction was .apprx.102 times faster than the III reaction. The equilibrium constant, estimated from 1H NMR which agreed with calcns. based on the equilibrium kinetics for I formation and decomposition, for II is .apprx.10 times that for III.  
 ACCESSION NUMBER: 1986:129252 CAPLUS  
 DOCUMENT NUMBER: 104:129252  
 TITLE: Kinetics of reversible endothermic elimination reactions:  $\beta$ -amino carboxylic esters and amides  
 AUTHOR(S): Johnson, Mark R.  
 CORPORATE SOURCE: Funct. Polym. Process Res. Lab., Dow Chem. Co., Midland, MI, 48674, USA  
 SOURCE: Journal of Organic Chemistry (1986), 51(6), 833-7  
 CODEN: JOCEAH; ISSN: 0022-3263  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 104:129252  
 IT 23939-28-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 23939-28-8 CAPLUS  
 CN  $\beta$ -Alanine, N,N'-1,2-ethanediylbis-, dimethyl ester (9CI) (CA INDEX NAME)



L8 ANSWER 42 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 GI

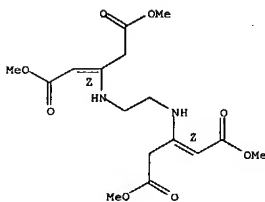


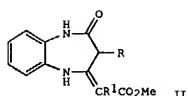
AB Cyclocondensation reactions of MeO<sub>2</sub>CCH=C:CRCO<sub>2</sub>Me (I; R = H, Et, Bu) with nucleophiles are reported. E.g., I (R = H) reacted with o-(H<sub>2</sub>N)2C<sub>6</sub>H<sub>4</sub> and (H<sub>2</sub>N)2CS to give 63% benzodiazepinone II (X = X' = NH) and 80% thiazinone III, resp. Reaction of I (R = H) with o-H<sub>2</sub>N<sub>2</sub>C<sub>6</sub>H<sub>4</sub>SH gave o-H<sub>2</sub>N<sub>2</sub>C<sub>6</sub>H<sub>4</sub>SC(CH<sub>2</sub>CO<sub>2</sub>Me):CHCO<sub>2</sub>Me, which cyclized at 200° to give 48% benzothiadiazepinone II (X = NH, X' = S), and reaction with o-H<sub>2</sub>N<sub>2</sub>C<sub>6</sub>H<sub>4</sub>OH gave 24% o-HOC<sub>6</sub>H<sub>4</sub>NHC(CH<sub>2</sub>CO<sub>2</sub>Me):CHCO<sub>2</sub>Me and 13% II (X = O, X' = NH). The reaction mechanisms are discussed; 7-exo-trig cyclization was favored

over 5-exo-trig for the preparation of azepines.  
 ACCESSION NUMBER: 1982:438920 CAPLUS  
 DOCUMENT NUMBER: 97:38920  
 TITLE: Cyclophilic reactions of allene-1,3-dicarboxylic esters. Part 1. Reaction with nucleophiles  
 AUTHOR(S): Ackroyd, John; Scheinmann, Feodor  
 CORPORATE SOURCE: Dep. Chem. Appl. Chem., Univ. Salford, Salford, M5 4WT, UK  
 SOURCE: Journal of Chemical Research, Synopses (1982), (4), 89  
 CODEN: JRPSCD; ISSN: 0308-2342  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 97:38920  
 IT 82325-25-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 82325-25-5 CAPLUS  
 CN 2-Pentenedioic acid, 3,3'-(1,2-ethanediyl-diimino)bis-, tetramethyl ester, (2,2')- (9CI) (CA INDEX NAME)

Double bond geometry as shown.

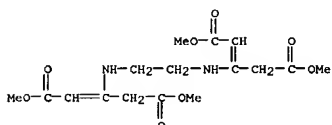
L8 ANSWER 42 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)





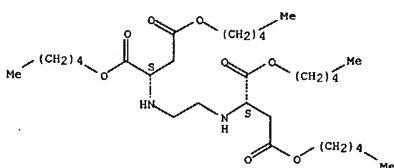
AB o-Phenylenediamine (I) underwent cyclocondensation with di-Me allene-1,3-dicarboxylates to give 1,5-benzodiazepinones. Thus, I reacted with MeO2CCH=C:CHCO2Me in MeOH at  $\approx 20^\circ$  to give a mixture of the benzodiazepinones II ( $R = R_1 = H, Et$ ). The reaction occurs by 7-exo-trig ring closure of the enamine intermediate.

ACCESSION NUMBER: 1981:497750 CAPLUS  
DOCUMENT NUMBER: 95:97750  
TITLE: A new route to 1H-1,5-benzodiazepinones  
AUTHOR(S): Ackroyd, John; Scheinmann, Feodor  
CORPORATE SOURCE: Dep. Chem. Appl. Chem., Univ. Salford, Salford, M5 4WT, UK  
SOURCE: Journal of the Chemical Society, Chemical Communications (1981), (7), 339-40  
CODEN: JCCCAT; ISSN: 0022-4936  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 95:97750  
IT 78688-61-6P  
RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)  
RN 78688-61-6 CAPLUS  
CN 2-Pentenedioic acid, 3,3'-(1,2-ethanediylidimino)bis-, tetramethyl ester (9CI) (CA INDEX NAME)



L8 ANSWER 44 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
RN 69812-80-2 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrapentyl ester, dihydrochloride (9CI) (CA INDEX NAME)

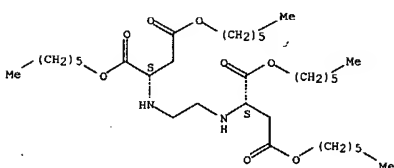
Absolute stereochemistry.



● 2 HCl

RN 69812-81-3 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrahexyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● 2 HCl

RN 69812-82-4 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetraheptyl ester, dihydrochloride (9CI) (CA INDEX NAME)

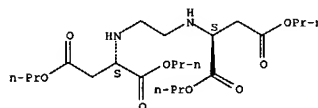
Absolute stereochemistry.

L8 ANSWER 44 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
AB The title diamines added to di-Cl-C7 and -C9 n-alkyl maleates to give the corresponding alkylenebis[asparaginate] esters and, in the case of 1,2-NHCH2CH2NH2, some (E)-RO2CCH=CHCONHCH2CH2NH2. HOCH2CH2NH2 gave HOCH2CH2NHCH(CO2R)CH2CO2R; the kinetics were determined

ACCESSION NUMBER: 1979:168021 CAPLUS  
DOCUMENT NUMBER: 90:168021  
TITLE: Reaction of maleic acid diesters with ethylene- and hexamethylenediamines, and monoethanolamine  
Tanchuk, Yu. V.; Ral'chuk, I. A.  
AUTHOR(S):  
CORPORATE SOURCE: Inst. Fiz.-Org. Khim. Uglekhim., Kiev, USSR  
SOURCE: Zhurnal Organicheskoi Khimii (1978), 14(11), 2252-8  
CODEN: ZORKAE; ISSN: 0514-7492  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 69812-78-8P 69812-79-9P 69812-80-2P 69812-81-3P 69812-82-4P 69812-83-5P 69952-46-1P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)  
RN 69812-78-8 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrapropyl ester, dihydrochloride (9CI) (CA INDEX NAME)

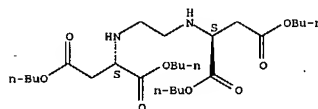
Absolute stereochemistry.



● 2 HCl

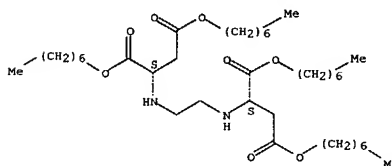
RN 69812-79-9 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetrabutyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



● 2 HCl

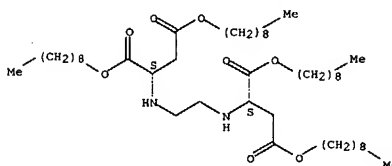
L8 ANSWER 44 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



● 2 HCl

RN 69812-83-5 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetraoctyl ester, dihydrochloride (9CI) (CA INDEX NAME)

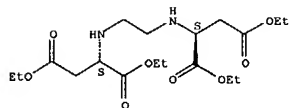
Absolute stereochemistry.



● 2 HCl

RN 69952-46-1 CAPLUS  
CN L-Aspartic acid, N,N'-1,2-ethanediylbis-, tetraethyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



●2 HCl

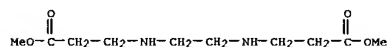
L8 ANSWER 45 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Me cellosolve acrylate (I) [3121-61-7], acrylic acid (III) [79-10-7], etc. were purified by distilling in the presence of an amine such as diethylenetriamine (III) [111-40-0]. Thus, 76 parts 95% II prepared by the gas phase oxidation of propylene was mixed with Me cellosolve [109-86-4] 84, benzene 75, H<sub>2</sub>SO<sub>4</sub> 1.5, and hydroquinone monomethyl ether 0.1 part, esterified, neutralized, washed to give 200 parts solution, mixed with 0.15 part phenothiazine and 0.15 part III, and distilled to prepare 80 parts I containing no furfural (IV) and benzaldehyde (V), compared with 180 ppm.

IV and 150 ppm V for I distilled in the absence of III.  
 ACCESSION NUMBER: 1977:468862 CAPLUS  
 DOCUMENT NUMBER: 87:68862  
 TITLE: Purification of (meth)acrylic acids and their esters  
 INVENTOR(S): Yamada, Akira; Kimura, Kaoru  
 PATENT ASSIGNEE(S): Toa Gosei Chemical Industry Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 52023017	A2	19770221	JP 1975-97507	19750813

PRIORITY APPLN. INFO.: JP 1975-97507 19750813

IT 23939-28-8  
 RL: USES (Uses)  
 (distilled of methyl cellosolve acrylate in presence of)  
 RN 23939-28-8 CAPLUS  
 CN β-Alanine, N,N'-1,2-ethanediylbis-, dimethyl ester (9CI) (CA INDEX NAME)

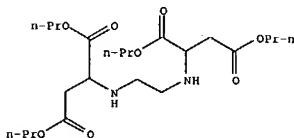


L8 ANSWER 46 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB The title reaction afforded 17-23% cis-XCOCH:CHCONHCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub> (I; X = C<sub>2</sub>-C<sub>7</sub> n-alkoxy) and 64-75% XCOCH<sub>2</sub>CH(COX)NHCH<sub>2</sub>CH<sub>2</sub>NHCH(COX)CH<sub>2</sub>COX (II; X = same), isolated as the dihydrochlorides; these esters were converted to I and II (X = NHNH<sub>2</sub>) by treatment with N<sub>2</sub>H<sub>4</sub>·H<sub>2</sub>O. I (X = NHNH<sub>2</sub>) and HONO gave cis-N<sub>3</sub>COCH:CHCONHCH<sub>2</sub>CH<sub>2</sub>OH, which gave the unstable isocyanate on heating; the latter was trapped by heating in the presence of amines to give the urea derivs.

ACCESSION NUMBER: 1976:420570 CAPLUS  
 DOCUMENT NUMBER: 85:20570  
 TITLE: Reaction of maleic acid esters with ethylenediamine  
 AUTHOR(S): Tanchuk, Yu. V.; Ral'chuk, I. A.  
 CORPORATE SOURCE: Inst. Khim. Vysokomol. Soedin., Kiev, USSR  
 SOURCE: Ukrainskii Khimicheskii Zhurnal (Russian Edition) (1976), 42(4), 390-4  
 CODEN: UKZHAU; ISSN: 0041-6045

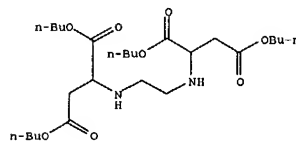
DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 59518-47-7P 59518-48-8P 59518-49-9P  
 59518-50-2P 59518-51-3P 59573-31-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 59518-47-7 CAPLUS  
 CN Aspartic acid, N,N'-1,2-ethanediylbis-, tetrapropyl ester, dihydrochloride (9CI) (CA INDEX NAME)



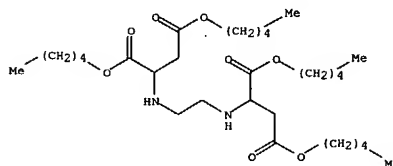
●2 HCl

RN 59518-48-8 CAPLUS  
 CN Aspartic acid, N,N'-1,2-ethanediylbis-, tetrabutyl ester, dihydrochloride (9CI) (CA INDEX NAME)



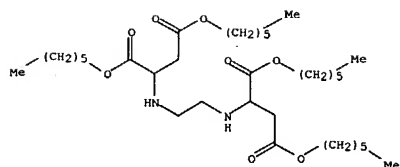
●2 HCl

RN 59518-49-9 CAPLUS  
 CN Aspartic acid, N,N'-1,2-ethanediylbis-, tetrapentyl ester, dihydrochloride (9CI) (CA INDEX NAME)



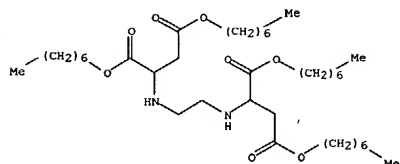
●2 HCl

RN 59518-50-2 CAPLUS  
 CN Aspartic acid, N,N'-1,2-ethanediylbis-, tetrahexyl ester, dihydrochloride (9CI) (CA INDEX NAME)



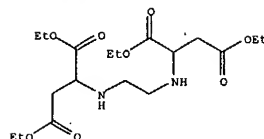
● 2 HCl

RN 59519-51-3 CAPLUS  
 CN Aspartic acid, N,N'-1,2-ethanediylbis-, tetraheptyl ester, dihydrochloride  
 (9CI) (CA INDEX NAME)



● 2 HCl

RN 59573-31-8 CAPLUS  
 CN Aspartic acid, N,N'-1,2-ethanediylbis-, tetraethyl ester, dihydrochloride  
 (9CI) (CA INDEX NAME)



● 2 HCl

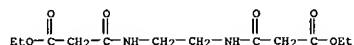
GI For diagram(s), see printed CA issue.  
 AB α- And β-aminocampholic acids (I, R = CH2NH2, R1 = CO2H; R = CO2H, R1 = CH2NH2) were prepared from camphor or camphoric anhydride via

the nitriles. Cyclobutaneacetic acid II was obtained by reduction of DL-cis-pinonic acid oxime. 2-H2NCH2C6H4C6H4CO2H-2 (III) was prepared by cleaving phenanthrenequinone monoxime with SOCl2 and reducing 2-NCC6H4C6H4CO2H-2. (HO2CCH2CONHCH2)2 (IV) was prepared by treating EtO2CCH2COCl with H2NCH2CH2NH2 and hydrolysis. I and II are antifibrinolytic, whereas III and IV are inactive. I (R = CH2NH2, R1 = CO2H) is more active than its isomer.

ACCESSION NUMBER: 1975:31261 CAPLUS  
 DOCUMENT NUMBER: 84:31261  
 TITLE: Synthesis and antifibrinolytic properties of some α-amino acids  
 AUTHOR(S): Mesnard, Pierre; Dupin, Jean P.; Brasington, Robert D.  
 CORPORATE SOURCE: Lab. Chim. Org. Controle Physicochim. Med., U.E.R. Sci. Pharm., Bordeaux, Fr.  
 SOURCE: European Journal of Medicinal Chemistry (1975), 10(3), 315-22  
 CODEN: EJMCAS; ISSN: 0223-5234  
 DOCUMENT TYPE: Journal  
 LANGUAGE: French

IT 13001-79-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and hydrolysis of)

RN 13001-79-1 CAPLUS  
 CN Propanoic acid, 3,3'-(1,2-ethanediyl-diimino)bis[3-oxo-, diethyl ester (9CI) (CA INDEX NAME)

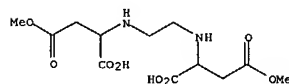


AB RR1NCH(CO2H)CH2CO2Me (I, R = H, R1 = e.g. Et, 2-, 3-, or 4-pyridyl, Me2CH, HOCH2CH2, 2- or 4-pyrimidyl, RR1 = morpholino, piperazino) were prepared in 30-83% yield by treatment of RR1NH with maleic anhydride (II) in refluxing MeOH. Similarly II reacted with H2N(CH2)nXH (n = 2, 3, X = NH, 1,4-piperazinediyl) to give 53-58% MeO2CCH2CH(CO2H)NH(CH2)nXCH(CO2H)CH2CO2Me.

ACCESSION NUMBER: 1975:579534 CAPLUS  
 DOCUMENT NUMBER: 83:179534  
 TITLE: Synthesis of N-substituted β-methyl DL-aspartates as potential hypocholesteremics  
 AUTHOR(S): Liu, K. C.; Wang, D.  
 CORPORATE SOURCE: Pharm. Inst., Natl. Def.-Med. Acad., Taipei, Taiwan  
 SOURCE: Archiv der Pharmazie (Weinheim, Germany) (1975), 308(7), 564-70  
 CODEN: ARPMAS; ISSN: 0365-6233  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German

IT 56972-55-5P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 56972-55-5 CAPLUS  
 CN Aspartic acid, N,N'-1,2-ethanediylbis-, 4,4'-dimethyl ester (9CI) (CA INDEX NAME)





L8 ANSWER 49 OF 64 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Chelating resins, useful for removing metals from industrial waste water,  
 are prepared by substitution of polyamines or polyalkylenimines with  
 carboxyalkyl groups and crosslinking the products, retaining  $\geq 2$   
 active NH/mol., with diepoxides. Thus, heating (CH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>Me)<sub>2</sub> 50,  
 bisphenol A diglycidyl ether 73.2, and PhMe 50 parts 4 hr at 80-90°  
 and heating the product with 60.2 parts 30% NaOH 2 hr at 80-100°  
 gives 94.5% polymer (I) [55918-10-0], N content 4.68%. Shaking  
 3.0 g 15% aqueous solution of I with 2 l. solution containing 20 ppm  
 CuSO<sub>4</sub>, CdSO<sub>4</sub>,  
 Pb(NO<sub>3</sub>)<sub>2</sub>, or HgCl<sub>2</sub> removes 98.5% Cu, 99.1% Cd, 99.5% Pb, and 87.6% Hg,  
 resp.  
 ACCESSION NUMBER: 1975:480326 CAPLUS  
 DOCUMENT NUMBER: 83:80326  
 TITLE: Chelate-forming polymers  
 INVENTOR(S): Moriya, Masafumi; Hosoda, Kazuo; Takai, Makoto; Mano,  
 Shiro  
 PATENT ASSIGNEE(S): Carapus Inc., Japan  
 SOURCE: Ger. Offen., 28 pp.  
 CODEN: GWXXBK  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 4  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2447305	A1	19750424	DE 1974-2447305	19741003
DE 2447305	C3	19790913		
DE 2447305	B2	19790111		
JP 50062185	A2	19750528	JP 1973-111507	19731005
JP 50068981	A2	19750609	JP 1973-111508	19731005
JP 52047755	B4	19771205		
JP 50126100	A2	19751003	JP 1974-32485	19740325
PRIORITY APPLN. INFO.:			JP 1973-111507	19731005
			JP 1973-111508	19731005
			JP 1974-32485	19740325

=> fil reg		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	309.91	923.88
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-44.80	-88.20

FILE 'REGISTRY' ENTERED AT 18:43:18 ON 30 SEP 2004  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
 provided by InfoChem.

STRUCTURE FILE UPDATES: 29 SEP 2004 HIGHEST RN 754169-63-6  
 DICTIONARY FILE UPDATES: 29 SEP 2004 HIGHEST RN 754169-63-6

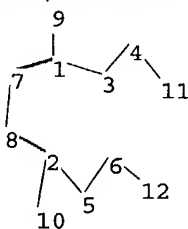
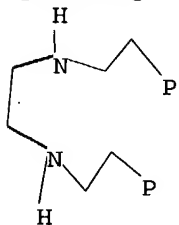
TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when  
 conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more  
 information enter HELP PROP at an arrow prompt in the file or refer  
 to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>  
 Uploading C:\Program Files\Stnexp\Queries\10643855.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12

chain bonds :

1-3 1-7 1-9 2-5 2-8 2-10 3-4 4-11 5-6 6-12 7-8

exact/norm bonds :

1-3 1-7 2-5 2-8

exact bonds :

1-9 2-10 3-4 4-11 5-6 6-12 7-8

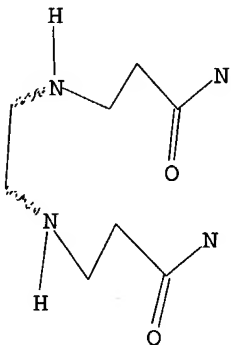
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS  
 10:CLASS 11:CLASS 12:CLASS

L9 STRUCTURE UPLOADED

=> d query

L9 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 19

SAMPLE SEARCH INITIATED 18:44:06 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 12675 TO ITERATE

7.9% PROCESSED 1000 ITERATIONS  
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)  
SEARCH TIME: 00.00.01

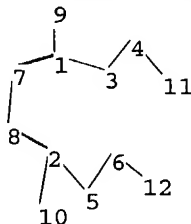
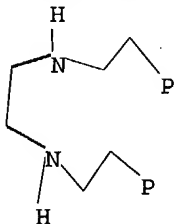
1 ANSWERS

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 246757 TO 260243  
PROJECTED ANSWERS: 40 TO 466

L10 1 SEA SSS SAM L9

=>

Uploading C:\Program Files\Stnexp\Queries\10643855.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12

chain bonds :

1-3 1-7 1-9 2-5 2-8 2-10 3-4 4-11 5-6 6-12 7-8

exact/norm bonds :

1-3 1-7 2-5 2-8

exact bonds :

1-9 2-10 3-4 4-11 5-6 6-12 7-8

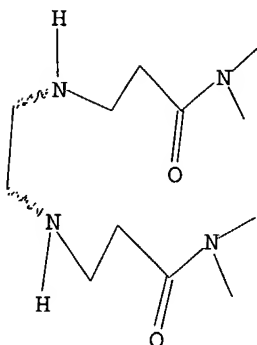
Match level :

1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS  
10:CLASS 11:CLASS 12:CLASS

L11 STRUCTURE UPLOADED

=> d query

L11 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l11

SAMPLE SEARCH INITIATED 18:45:54 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED - 208 TO ITERATE

100.0% PROCESSED 208 ITERATIONS 0 ANSWERS  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*  
BATCH \*\*COMPLETE\*\*  
PROJECTED ITERATIONS: 3295 TO 5025  
PROJECTED ANSWERS: 0 TO 0

L12 0 SEA SSS SAM L11

=> s l11 full

FULL SEARCH INITIATED 18:45:58 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED - 3708 TO ITERATE

100.0% PROCESSED 3708 ITERATIONS 1 ANSWERS  
SEARCH TIME: 00.00.01

L13 1 SEA SSS FUL L11

=> fil caplus

COST IN U.S. DOLLARS SINCE FILE TOTAL

	ENTRY	SESSION
FULL ESTIMATED COST	157.10	1080.98
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	0.00	-88.20

FILE 'CAPLUS' ENTERED AT 18:46:02 ON 30 SEP 2004  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
 COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 30 Sep 2004 VOL 141 ISS 14  
 FILE LAST UPDATED: 29 Sep 2004 (20040929/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l13

L14 2 L13

=> d l14 1-2 abs ibib histr

'HISTR' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

ABS ----- GI and AB  
 ALL ----- BIB, AB, IND, RE  
 APPS ----- AI, PRAI  
 BIB ----- AN, plus Bibliographic Data and PI table (default)  
 CAN ----- List of CA abstract numbers without answer numbers  
 CBIB ----- AN, plus Compressed Bibliographic Data  
 DALL ----- ALL, delimited (end of each field identified)  
 DMAX ----- MAX, delimited for post-processing  
 FAM ----- AN, PI and PRAI in table, plus Patent Family data  
 FBIB ----- AN, BIB, plus Patent FAM  
 IND ----- Indexing data  
 IPC ----- International Patent Classifications  
 MAX ----- ALL, plus Patent FAM, RE  
 PATS ----- PI, SO  
 SAM ----- CC, SX, TI, ST, IT  
 SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;  
                   SCAN must be entered on the same line as the DISPLAY,  
                   e.g., D SCAN or DISPLAY SCAN)  
 STD ----- BIB, IPC, and NCL  
 IABS ----- ABS, indented with text labels

IALL ----- ALL, indented with text labels  
 IBIB ----- BIB, indented with text labels  
 IMAX ----- MAX, indented with text labels  
 ISTD ----- STD, indented with text labels  
  
 OBIB ----- AN, plus Bibliographic Data (original)  
 OIBIB ----- OBIB, indented with text labels  
  
 SBIB ----- BIB, no citations  
 SIBIB ----- IBIB, no citations  
  
 HIT ----- Fields containing hit terms  
 HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)  
                   containing hit terms  
 HITRN ----- HIT RN and its text modification  
 HITSTR ----- HIT RN, its text modification, its CA index name, and  
                   its structure diagram  
 HITSEQ ----- HIT RN, its text modification, its CA index name, its  
                   structure diagram, plus NTE and SEQ fields  
 FHITSTR ----- First HIT RN, its text modification, its CA index name, and  
                   its structure diagram  
 FHITSEQ ----- First HIT RN, its text modification, its CA index name, its  
                   structure diagram, plus NTE and SEQ fields  
 KWIC ----- Hit term plus 20 words on either side  
 OCC ----- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field codes. For a list of the display field codes, enter HELP DFIELDS at an arrow prompt (=>). Examples of formats include: TI; TI,AU; BIB,ST; TI,IND; TI,SO. You may specify the format fields in any order and the information will be displayed in the same order as the format specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR, FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC to view a specified Accession Number.

ENTER DISPLAY FORMAT (BIB):nos  
 'NOS' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

ABS ----- GI and AB  
 ALL ----- BIB, AB, IND, RE  
 APPS ----- AI, PRAI  
 BIB ----- AN, plus Bibliographic Data and PI table (default)  
 CAN ----- List of CA abstract numbers without answer numbers  
 CBIB ----- AN, plus Compressed Bibliographic Data  
 DALL ----- ALL, delimited (end of each field identified)  
 DMAX ----- MAX, delimited for post-processing  
 FAM ----- AN, PI and PRAI in table, plus Patent Family data  
 FBIB ----- AN, BIB, plus Patent FAM  
 IND ----- Indexing data  
 IPC ----- International Patent Classifications  
 MAX ----- ALL, plus Patent FAM, RE  
 PATS ----- PI, SO  
 SAM ----- CC, SX, TI, ST, IT  
 SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;  
                   SCAN must be entered on the same line as the DISPLAY,  
                   e.g., D SCAN or DISPLAY SCAN)

STD ----- BIB, IPC, and NCL  
  
 IABS ----- ABS, indented with text labels  
 IALL ----- ALL, indented with text labels  
 IBIB ----- BIB, indented with text labels  
 IMAX ----- MAX, indented with text labels  
 ISTD ----- STD, indented with text labels  
  
 OBIB ----- AN, plus Bibliographic Data (original)  
 OIBIB ----- OBIB, indented with text labels  
  
 SBIB ----- BIB, no citations  
 SIBIB ----- IBIB, no citations  
  
 HIT ----- Fields containing hit terms  
 HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT)  
                   containing hit terms  
 HITRN ----- HIT RN and its text modification  
 HITSTR ----- HIT RN, its text modification, its CA index name, and  
                   its structure diagram  
 HITSEQ ----- HIT RN, its text modification, its CA index name, its  
                   structure diagram, plus NTE and SEQ fields  
 FHITSTR ----- First HIT RN, its text modification, its CA index name, and  
                   its structure diagram  
 FHITSEQ ----- First HIT RN, its text modification, its CA index name, its  
                   structure diagram, plus NTE and SEQ fields  
 KWIC ----- Hit term plus 20 words on either side  
 OCC ----- Number of occurrence of hit term and field in which it occurs

To display a particular field or fields, enter the display field codes. For a list of the display field codes, enter HELP DFIELDS at an arrow prompt (=>). Examples of formats include: TI; TI,AU; BIB,ST; TI,IND; TI,SO. You may specify the format fields in any order and the information will be displayed in the same order as the format specification.

All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR, FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC to view a specified Accession Number.  
 ENTER DISPLAY FORMAT (BIB):bib

L14 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1970:478133 CAPLUS  
 DN 73:78133  
 TI Ethylene sulfide polymers stabilized with polyamine additives  
 IN Gobran, Riad H.; Bulbenko, George F.; Peterson, Elizabeth A.  
 PA Thiokol Chemical Corp.  
 SO U.S., 6 pp.  
 CODEN: USXXAM  
 DT Patent  
 LA English  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3522205	A	19700728	US 1968-719839	19680409
PRAI US 1968-719839		19680409		

L14 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1965:446752 CAPLUS  
 DN 63:46752  
 OREF 63:8518h,8519a  
 TI Ethylene sulfide polymers  
 IN Osborn, Stephen W.; Peterson, Elizabeth A.; Patarcity, Adam J.; Gobran, Riad H.; Bulbenko, George F.  
 PA Thiokol Chemical Corp.  
 SO 41 pp.  
 DT Patent  
 LA Unavailable  
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 645691		19640925	BE	
PRAI US		19630325		



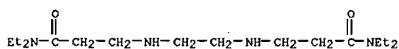
=> d 114 1-2 abs ibib hitstr

L14 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Ethylene sulfide polymers are stabilized against thermal degradation during molding by the addition of polyamines. The polyamines, used at 1-3 weight % concentration, include triethylenetetramine, tetraethylenepentamine, N-(β-hydroxyethyl)diethylenetriamine, 1,1'-ethylenediurea, N,N'-bis(cyanoacetyl)ethylenediamine, N,N'-bis(2-aminoethyl)-4,4'-oxydibenzylamine, and polyamine adducts with ethylene oxide, styrene oxide, acrylonitriles, isocyanates, benzoyl chloride, and acrylamides.

ACCESSION NUMBER: 1970:478133 CAPLUS  
 DOCUMENT NUMBER: 73:78133  
 TITLE: Ethylene sulfide polymers stabilized with polyamine additives  
 INVENTOR(S): Gobran, Riad H.; Bulbenko, George F.; Peterson, Elizabeth A.  
 PATENT ASSIGNEE(S): Thiokol Chemical Corp.  
 SOURCE: U.S., 6 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3522205	A	19700728	US 1968-719839	19680409
PRIORITY APPLN. INFO.: US 1968-719839 19680409				

IT 3216-86-2  
 RL: USES (Uses)  
 (stabilizers, for ethylene sulfide polymers)  
 RN 3216-86-2 CAPLUS  
 CN Propionamide, 3,3'-(ethylenediimino)bis(N,N-diethyl- (7CI, 8CI) (CA  
 INDEX  
 NAME)

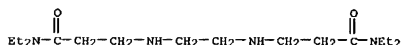


L14 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Ethylene sulfide (I) polymers, which can be molded, are treated with 0.5-3 weight % of an amide, such as an adipamide, a polyamide, an acrylamide, or an amine, such as an alkylamine containing >8 C atoms, an alkylenediamine, an arylenediamine, a hydroxylated amine, a polyalkylene polyamine, or an N heterocyclic compound to give heat-stable compns. Thus, 22.650 kg. I is polymerized for 2 hrs. at 82.22° in 87.8 l. C6H6 in the presence of 2.27 l. Et2Zn-H2O catalyst (Et2Zn-H2O mole ratio 1:0.9, 25.2 millimoles Et2Zn) to give poly(ethylene sulfide) (II), m. 206-8°. II (10 g.) is mixed with 2.5 weight % adipamide to give a composition of melt index (1 min.) 0.035, as compared with 0.112 for the control.

ACCESSION NUMBER: 1965:446752 CAPLUS  
 DOCUMENT NUMBER: 63:46752  
 ORIGINAL REFERENCE NO.: 63:8518h, 8519a  
 TITLE: Ethylene sulfide polymers  
 INVENTOR(S): Osborn, Stephen W.; Peterson, Elizabeth A.; Patarcity,  
 PATENT ASSIGNEE(S): Adam J.; Gobran, Riad H.; Bulbenko, George F.  
 SOURCE: Thiokol Chemical Corp.  
 DOCUMENT TYPE: 41 pp.  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 645691		19640925	BE	
PRIORITY APPLN. INFO.: US 19630325				

IT 3216-86-2, Propionamide, 3,3'-(ethylenediimino)bis(N,N-diethyl- (ethylene sulfide polymer stabilization by)  
 RN 3216-86-2 CAPLUS  
 CN Propionamide, 3,3'-(ethylenediimino)bis(N,N-diethyl- (7CI, 8CI) (CA  
 INDEX  
 NAME)



=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

12.08

1093.06

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-1.40

-89.60

FILE 'REGISTRY' ENTERED AT 18:46:40 ON 30 SEP 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 29 SEP 2004 HIGHEST RN 754169-63-6

DICTIONARY FILE UPDATES: 29 SEP 2004 HIGHEST RN 754169-63-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

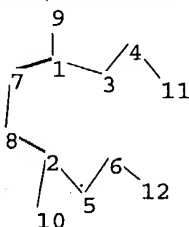
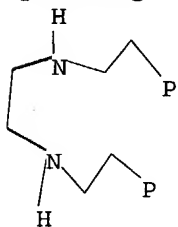
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10643855.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12

chain bonds :

1-3 1-7 1-9 2-5 2-8 2-10 3-4 4-11 5-6 6-12 7-8

exact/norm bonds :

1-3 1-7 2-5 2-8

exact bonds :

1-9 2-10 3-4 4-11 5-6 6-12 7-8

Match level :

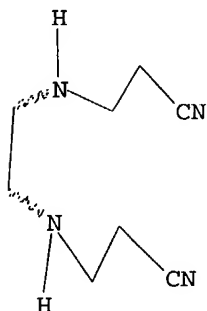
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS

10:CLASS 11:CLASS 12:CLASS

L15        STRUCTURE UPLOADED

=> d query

L15                STR



Structure attributes must be viewed using STN Express query preparation.

=> s l15

SAMPLE SEARCH INITIATED 18:48:15 FILE 'REGISTRY'  
SAMPLE SCREEN SEARCH COMPLETED -        60 TO ITERATE

100.0% PROCESSED        60 ITERATIONS                                2 ANSWERS  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:    ONLINE    \*\*COMPLETE\*\*  
                              BATCH    \*\*COMPLETE\*\*  
PROJECTED ITERATIONS:        736 TO        1664  
PROJECTED ANSWERS:            2 TO        124

L16                2 SEA SSS SAM L15

=> s l15 full

FULL SEARCH INITIATED 18:48:20 FILE 'REGISTRY'  
FULL SCREEN SEARCH COMPLETED -    1395 TO ITERATE

100.0% PROCESSED        1395 ITERATIONS                            57 ANSWERS  
SEARCH TIME: 00.00.01

L17                57 SEA SSS FUL L15

=> fil.caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	156.26	1249.32

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-89.60

FILE 'CAPLUS' ENTERED AT 18:48:24 ON 30 SEP 2004  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 30 Sep 2004 VOL 141 ISS 14  
FILE LAST UPDATED: 29 Sep 2004 (20040929/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l17

L18 101 L17

=> d l18 1-101 abs ibib hitstr

L18 ANSWER 1 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB R5CH2CH2NHCR1R2CR3R4NHCH2CH2R6 [R1-R4 = H, alkyl, aryl, aralkyl; R1-R4 =  
atoms to form a C5-6 cycloalkyl ring; R5, R6 = CO2R7, CONR8R9, cyano,  
PO(OR10)2; R7-R10 = alkyl, aryl, aralkyl; NR8R9 = cyclic amino;  
stereogenic atoms may be R or S; with the exception of meso compds.],

were prepared Thus, (1S,2S)-diphenylethylenediamine in ethanol was treated  
with acrylonitrile and the mixture was stirred 72 h at room temperature to  
give (1S,2S)-bis[N-(2-cyanoethyl)amino]-1,2-diphenylethane in 99% purity.

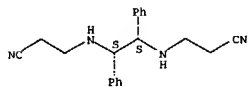
This was used with Et2Zn and polymethylhydrosiloxane for asym. reduction of  
propiophenone, isobutyrophenone, 2-methylacetophenone, and  
2-bromoacetophenone.

ACCESSION NUMBER: 2004:157496 CAPLUS  
DOCUMENT NUMBER: 140:217374  
TITLE: Preparation of optically active 1,2-diaminoalkanes  
and their use in catalytic processes  
INVENTOR(S): Koecher, Juergen  
PATENT ASSIGNEE(S): Bayer Chemicals AG, Germany  
SOURCE: Eur. Pat. Appl., 16 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1391448	A1	20040225	EP 2003-18220	20030811
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10238114	A1	20040304	DE 2002-10238114	20020821
US 2004044238	A1	20040304	US 2003-643855	20030819
PRIORITY APPLN. INFO.:			DE 2002-10238114	A 20020821

OTHER SOURCE(S): CASREACT 140:217374; MARPAT 140:217374  
IT 664345-35-1P, (1S,2S)-Bis[N-(2-cyanoethyl)amino]-1,2-  
diphenylethane 664345-36-2P, (1R,2R)-Bis[N-(2-cyanoethyl)amino]-  
1,2-diphenylethane  
RL: CMT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);  
USES (Uses)  
(preparation of optically active 1,2-diaminoalkanes and their use in  
catalytic processes)  
RN 664345-35-1 CAPLUS  
CN Propanenitrile, 3,3'-[[[(1S,2S)-1,2-diphenyl-1,2-ethanediyl]diimino]bis-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L18 ANSWER 2 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB A method is disclosed for manufacturing of finely dispersed thermoplastic  
polyurethane-ureas by dispersing an isocyanate component in water in the  
presence of surfactants. An isocyanate component of the present  
invention  
is a block copolymer containing 0.7-6.0% free isocyanate groups, said  
isocyanate component is based on an oligodiols, diisocyanate and a low  
mol.

weight chain extender having reactive hydrogen atoms. The method of the  
invention makes it possible to manufacture finely dispersed  
polyurethane-ureas  
in the form of spherical particles 20-2000 μ or microfiber having 10-50  
μ diameter and 500-2000 μ length with decreased residual elongation  
values and increased tensile strength and softening temps.

ACCESSION NUMBER: 2003:870939 CAPLUS  
DOCUMENT NUMBER: 140:424110  
TITLE: Method of manufacturing thermoplastic  
polyurethane-ureas in finely dispersed form  
Malyshova, T. L.; Matyushov, V. F.; Golovan, S. V.  
INVENTOR(S): Institut Khimii Vysokomolekulyarnykh Soedinenii NAN  
PATENT ASSIGNEE(S): Ukraine, Ukraine; Golovan Sergei Vladimirovich  
SOURCE: Russ., No pp. given  
CODEN: RUXXE7  
DOCUMENT TYPE: Patent  
LANGUAGE: Russian  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2214424	C1	20031020	RU 2002-107150	20020322
PRIORITY APPLN. INFO.:			RU 2002-107150	20020322

IT 691899-74-BP  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(method of manufacturing thermoplastic polyurethane-ureas in finely  
dispersed  
form)

RN 691899-74-8 CAPLUS  
CN Propanenitrile, 3,3'-[(1,2-ethanediyl)diimino]bis-, polymer with  
ethenylbenzene, 2,5-furandione, 1,1'-methylenebis[4-isocyanatobenzene]  
and 4,4'-[oxybis(4,1-butanediyl)oxy]bis[1-butanol], block, graft (9CI) (CA  
INDEX NAME)

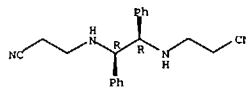
CM 1  
CRN 61136-07-0  
CMF C16 H34 O5

HO-(CH2)4-O-(CH2)4-O-(CH2)4-O-(CH2)4-OH

CM 2  
CRN 3217-00-3  
CMF C8 H14 N4

L18 ANSWER 1 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
RN 664345-36-2 CAPLUS  
CN Propanenitrile, 3,3'-[[[(1R,2R)-1,2-diphenyl-1,2-ethanediyl]diimino]bis-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

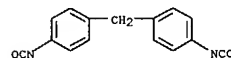
L18 ANSWER 2 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

NC-CH2-CH2-NH-CH2-CH2-NH-CH2-CH2-CN

CM 3  
CRN 108-31-6  
CMF C4 H2 O3



CM 4  
CRN 101-68-8  
CMF C15 H10 N2 O2



CM 5  
CRN 100-42-5  
CMF C8 H8

H2C=CH-Ph

IT 691900-05-7P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(microfibers; method of manufacturing thermoplastic  
polyurethane-ureas in  
finely dispersed form)  
RN 691900-05-7 CAPLUS  
CN Hexanedioic acid, polymer with 1,4-butanediol, 1,2-ethanediamine,  
1,2-ethanediol, 3,3'-[(1,2-ethanediyl)diimino]bis[propanenitrile],  
ethenylbenzene, 2,5-furandione and  
1,1'-methylenebis[4-isocyanatobenzene],  
block, graft (9CI) (CA INDEX NAME)

CM 1  
CRN 3217-00-3  
CMF C8 H14 N4

L18 ANSWER 2 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 $\text{NC}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{CH}_2-\text{CH}_2-\text{CN}$

CM 2  
 CRN 124-04-9  
 CMF C6 H10 O4

$\text{HO}_2\text{C}-(\text{CH}_2)_4-\text{CO}_2\text{H}$

CM 3  
 CRN 110-63-4  
 CMF C4 H10 O2

$\text{HO}-(\text{CH}_2)_4-\text{OH}$

CM 4  
 CRN 108-31-6  
 CMF C4 H2 O3



CM 5  
 CRN 107-21-1  
 CMF C2 H6 O2

$\text{HO}-\text{CH}_2-\text{CH}_2-\text{OH}$

CM 6  
 CRN 107-15-3  
 CMF C2 H8 N2

$\text{H}_2\text{N}-\text{CH}_2-\text{CH}_2-\text{NH}_2$

CM 7  
 CRN 101-68-8

L18 ANSWER 3 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Polyfunctional amino-containing oligoethers with terminal epoxy or secondary amino groups have been synthesized by reaction of bisphenol A or diethylene glycol epoxy oligomers with aliphatic primary amines or secondary diamines. Mol. weight, glass transition temps., and heat capacity of the products are determined  
 ACCESSION NUMBER: 2003:163949 CAPLUS  
 DOCUMENT NUMBER: 139:382138  
 TITLE: Synthesis of epoxy amine oligomers based on aliphatic amines  
 AUTHOR(S): Shevchuk, A. V.; Vortman, M. Ya.; Gryshchuk, O. I.; Protasova, N. V.; Klimenko, N. S.; Privalko, E. G.; Shevchenko, V. V.  
 CORPORATE SOURCE: Institute of Macromolecular Chemistry, National Academy of Science of Ukraine, Kiev, 02160, Ukraine  
 SOURCE: Kompozitsiini Polimerni Materiali (2002), 24(2), 78-82  
 PUBLISHER: CODEN: KPMOAO  
 NAN Ukraini, Institut Khimii Visokomolekulyarnikh Spoluk  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Ukrainian  
 IT 624396-73-2F 624397-08-6P  
 RI: FRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (synthesis of epoxy-amine oligomers based on aliphatic amines)  
 RN 624396-73-2 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediylidimino)bis-, polymer with (chloromethyl)oxirane and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

CM 1  
 CRN 3217-00-3  
 CMF C8 H14 N4

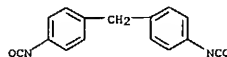
$\text{NC}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{CH}_2-\text{CH}_2-\text{CN}$

CM 2  
 CRN 106-89-8  
 CMF C3 H5 Cl O



CM 3  
 CRN 80-05-7  
 CMF C15 H16 O2

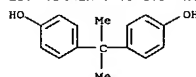
L18 ANSWER 2 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 CMF C15 H10 N2 O2



CM 8  
 CRN 100-42-5  
 CMF C8 H8

$\text{H}_2\text{C}=\text{CH}-\text{Ph}$

L18 ANSWER 3 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



RN 624397-08-6 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediylidimino)bis-, polymer with (chloromethyl)oxirane and 2,2'-oxybis[ethanol] (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 3217-00-3  
 CMF C8 H14 N4

$\text{NC}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{CH}_2-\text{CH}_2-\text{CN}$

CM 2  
 CRN 111-46-6  
 CMF C4 H10 O3

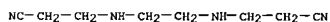
$\text{HO}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{OH}$

CM 3  
 CRN 106-89-8  
 CMF C3 H5 Cl O



L18 ANSWER 4 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Computational screening is suggested as a way to set priorities for further testing of high production volume (HPV) chems. for mutagenicity and other toxic endpoints. Results are presented for batch screening of 2484 HPV chems. to predict their mutagenicity in Salmonella typhimurium (Ames test). The chems. were tested against 15 databases for Salmonella strains TA100, TA1535, TA1537, TA97 and TA98, both with metabolic activation (using rat liver and hamster liver S9 mix test) and without metabolic activation. Of the 2484 chems., 1868 are predicted to be completely nonmutagenic in all of the 15 data modules and 39 chems. were found to contain structural fragments outside the knowledge of the expert system and therefore suggested for further evaluation. The remaining 616 chems. were found to contain different biophores (structural alerts) believed to be linked to mutagenicity. The chems. were ranked in descending order according to their predicted mutagenic potential and the first 100 chems. with highest mutagenicity scores are presented. The screening result offers hope that rapid and inexpensive computational methods can aid in prioritizing the testing of HPV chems., save time and animals and help to avoid needless expense.

ACCESSION NUMBER: 2003:91733 CAPLUS  
 DOCUMENT NUMBER: 139:18525  
 TITLE: In-Silico Screening of High Production Volume Chemicals for Mutagenicity using the MCASE QSAR Expert System  
 AUTHOR(S): Klopman, G.; Chakravarti, S. K.; Harris, N.; Ivanov, J.; Saiakhov, R. D.  
 CORPORATE SOURCE: Department of Chemistry, Case Western Reserve University, Cleveland, OH, 44106, USA  
 SOURCE: SAR and QSAR in Environmental Research (2003), 14(2), 165-180  
 CODEN: SQERED; ISSN: 1062-936X  
 PUBLISHER: Taylor & Francis Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 3217-00-3  
 RL: ADV (Adverse effect, including toxicity); FRP (Properties); BIOL (Biological study)  
 (in-silico screening of high production volume chems. for mutagenicity using MULTICASE QSAR expert system)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyl)diimino)bis- (9CI) (CA INDEX NAME)

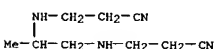


REFERENCE COUNT: 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RECORD.

FORMAT

L18 ANSWER 6 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB The P2 transporter is a nucleoside transporter which is unique to the protozoan parasite Trypanosoma brucei, the causative organism of Human African Trypanosomiasis. The transporter has been shown to bind some structural motifs not recognized by other transporters. In this paper we describe the use of the melamine motif, a substrate of the P2 transporter, as a potential tool to selectively deliver polyamine analogs to the parasites. The synthesis of a number of polyamine analogs attached to a variety of melamine analogs is described. Many of the compds. were shown to competitively inhibit uptake of adenosine, indicating that they are recognized by the transporter. Some of the compds. showed good in vitro activity against the parasites.

ACCESSION NUMBER: 2001:680366 CAPLUS  
 DOCUMENT NUMBER: 135:366327  
 TITLE: Synthesis and Biological Evaluation of s-Triazine Substituted Polyamines as Potential New Anti-Trypanosomal Drugs  
 AUTHOR(S): Klenke, Burkhard; Stewart, Mhairi; Barrett, Michael P.; Brun, Reto; Gilbert, Ian H.  
 CORPORATE SOURCE: Welsh School of Pharmacy, Cardiff University, Cardiff,  
 SOURCE: CF10 3XF, UK  
 Journal of Medicinal Chemistry (2001), 44(21), 3440-3452  
 CODEN: JMCMAR; ISSN: 0022-2623  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 116546-31-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (Preparation and structure activity relationships of s-triazine substituted polyamines as antitrypanosomal drugs)  
 RN 116546-31-7 CAPLUS  
 CN Propanenitrile, 3,3'-(1-methyl-1,2-ethanediyl)diimino)bis- (9CI) (CA INDEX NAME)

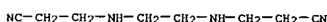


REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RECORD.

FORMAT

L18 ANSWER 5 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB A new group of nonionics, so-called sugar surfactants having a gemini structure, N,N'-bisalkyl-N,N'-bis[(3-gluconylamido)propyl]ethylenediamines [bis(CnGA): Cn = n-C8H17, n-C12H25], N,N'-bisdodecyl-N,N'-bis[(3-glucoheptonylamido)propyl]ethylenediamine [bis(C12GH)], and N,N'-bisalkyl-N,N'-bis[(3-lactobionylamido)propyl]ethylenediamines [bis(CnLA): Cn = n-C8H17, n-C12H25], were prepared in a convenient four-step procedure from easily accessible reagents. Their structure and purity were confirmed by means of elemental anal., electrospray ionization MS (ESI-MS), and NMR spectra-1H, 13C, 1H-13C COSY, and distortionless enhancement by polarization transfer. All tested surfactants were practically nontoxic to gram-neg. bacteria and fungi, but they inhibited the growth of some gram-pos. bacteria. From the results of the Closed Bottle test (OECD Guideline 301D) for biodegradability measurements, it was concluded that the tested aldonamide gemini structures are biodegraded by environmental microorganisms to 16-55% of the initial levels by day 28, the extent depending on both the aldonamide type and the alkyl chain length. Consequently, N,N'-bisalkyl-N,N'-bis[(3-aldonylamido)propyl]ethylenediamines are a surfactant class having low ecotoxicity and fulfilling requirements desired from an ecol. standpoint.

ACCESSION NUMBER: 2002:596284 CAPLUS  
 DOCUMENT NUMBER: 137:312723  
 TITLE: Aldonamide-type gemini surfactants: synthesis, structural analysis, and biological properties  
 AUTHOR(S): Wilk, Kazimiera A.; Syper, Ludwik; Domagalska, Beata W.; Komorek, Urszula; Maliszewska, Irena; Gancarz, Roman  
 CORPORATE SOURCE: Institute of Organic and Polymer Technology, Wroclaw University of Technology, Wroclaw, 50-370, Pol.  
 SOURCE: Journal of Surfactants and Detergents (2002), 5(3), 235-244  
 CODEN: JSDEFL; ISSN: 1097-3958  
 PUBLISHER: AOCs Press  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 3217-00-3P, N,N'-Bis(2-cyanoethyl)ethylenediamine  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (intermediate; synthesis and biodegradability of aldonamide-type gemini sugar surfactants)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyl)diimino)bis- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RECORD.

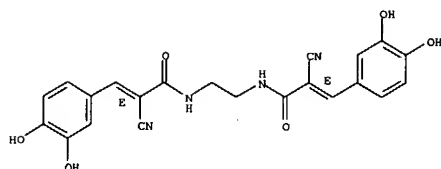
FORMAT

L18 ANSWER 7 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB IGF-1 and its receptor play a pivotal role in many cancers, and therefore, IGF-1R is an attractive target for the design of inhibitors. In this communication, we report on a number of lead compds. for inhibitors of the isolated IGF-1R kinase. The search for these compds. utilized two novel in vitro assays and was aided by the knowledge of the three-dimensional structure of the insulin receptor kinase domain, which is 84% homologous to the IGF-1R kinase domain. The most potent inhibitor found in these assays was tyrphostin AG 538, with an IC50 = 400 nM. In computer modeling, AG 538 was placed in the kinase domain of the insulin receptor and was able to sit in place of tyrosines 1158 and 1162, which undergo autophosphorylation. Exptl. it is indeed found that AG 538 does not compete with ATP but competes with the IGF-1R substrate. We prepared I-OMe AG 538, which is more hydrophobic and less sensitive to oxidation than AG 538. Both AG 538 and I-OMe AG 538 inhibit IGF-1R autophosphorylation in intact cells in a dose-dependent manner but I-OMe-AG 538 is superior, probably because of its enhanced hydrophobic nature. Both compds. inhibit the activation of the downstream targets PKB and Erk2. These findings suggest that AG 538 and I-OMe-AG 538 can serve as a lead compound for the development of substrate competitive inhibitors of the IGF-1R. The possible advantage of substrate competitive inhibitors vis-a-vis ATP competitive inhibitors is discussed.

ACCESSION NUMBER: 2000:828028 CAPLUS  
 DOCUMENT NUMBER: 134:127813  
 TITLE: Substrate Competitive Inhibitors of IGF-1 Receptor Kinase  
 AUTHOR(S): Blum, Galia; Gazit, Aviv; Levitzki, Alexander  
 CORPORATE SOURCE: Department of Biological Chemistry, Alexander Silberman Institute of Life Sciences Department of Organic Chemistry, Institute of Chemistry The Hebrew University of Jerusalem, Jerusalem, 91904, Israel  
 SOURCE: Biochemistry (2000), 39(51), 15705-15712  
 CODEN: BICHAU; ISSN: 0006-2960  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 168835-84-5, AG 548  
 RL: RAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (substrate competitive inhibitors of IGF-1 receptor kinase)  
 RN 168835-84-5 CAPLUS  
 CN 2-Propanamide, N,N'-1,2-ethanediylbis(2-cyano-3-(3,4-dihydroxyphenyl)-, (2E,2'E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.





REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

AB We present the first receptor-based pharmacophore model for HIV-1 integrase. The development of "dynamic" pharmacophore models is a new method that accounts for the inherent flexibility of the active site and aims to reduce the entropic penalties associated with binding a ligand. Furthermore, this new drug discovery method overcomes the limitation of

an incomplete crystal structure of the target protein. A mol. dynamics (MD) simulation describes the flexibility of the uncomplexed protein. Many conformational models of the protein are saved from the MD simulations

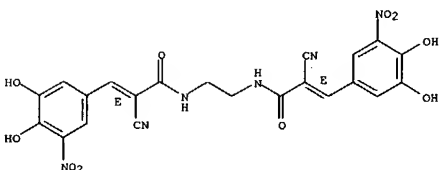
and used in a series of multi-unit search for interacting conformers (MUSIC) simulations. MUSIC is a multiple-copy minimization method, available in the BOSS program; it is used to determine binding regions for probe mols. containing functional groups that complement the active site. All

protein conformations from the MD are overlaid, and conserved binding regions for the probe mols. are identified. Those conserved binding regions define the dynamic pharmacophore model. Here, the dynamic model is compared to known inhibitors of the integrase as well as a three-point, ligand-based pharmacophore model from the literature. Also, a "static" pharmacophore model was determined in the standard fashion, using a single crystal structure.

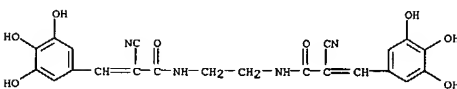
Inhibitors thought to bind in the active site of HIV-1 integrase fit the dynamic model but not the static model. Finally, we have identified a set of compds. from the Available Chems. Directory that fit the dynamic pharmacophore model, and exptl. testing of the compds. has confirmed several new inhibitors.

ACCESSION NUMBER: 2000:304993 CAPLUS  
DOCUMENT NUMBER: 133:114586  
TITLE: Developing a Dynamic Pharmacophore Model for HIV-1 Integrase  
AUTHOR(S): Carlson, Heather A.; Masukawa, Kevin M.; Rubins, Kathleen; Bushman, Fredric D.; Jorgensen, William L.; Lins, Roberto D.; Briggs, James M.; McCammon, J. Andrew  
CORPORATE SOURCE: Department of Chemistry and Biochemistry and Department of Pharmacology, University of California San Diego, La Jolla, CA, 92093-0365, USA  
SOURCE: Journal of Medicinal Chemistry (2000), 43(11), 2100-2114  
CODEN: JMCMAR; ISSN: 0022-2623  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 251320-67-9 285987-45-3  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study) (receptor-based pharmacophore model for HIV-1 integrase)  
RN 251320-67-9 CAPLUS  
CN 2-Propenamide, N,N'-1,2-ethanediyldis(2-cyano-3-(3,4-dihydroxy-5-nitrophenyl)-, (2E,2'E)- (9CI) (CA INDEX NAME)

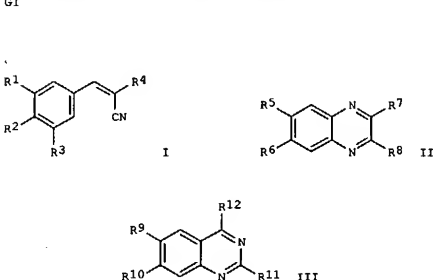
Double bond geometry as shown.



RN 285987-45-3 CAPLUS  
CN 2-Propenamide, N,N'-1,2-ethanediyldis(2-cyano-3-(3,4,5-trihydroxyphenyl)-(9CI) (CA INDEX NAME)



REFERENCE COUNT: 84 THERE ARE 84 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT



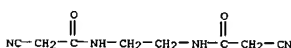
AB Title compds., e.g., [I, II, III; R1 = Me2CH, Me3C, iodo, Br, OH, Me; R2 = OH; R3 = Me2CH, Me3C, OH, H, Me; R4 = 1-phenyl-n-propylaminocarbonyl, (E)-1-cyano-2-[(3,5-diisopropyl-4-hydroxyphenyl)ethenylsulfonamide], aminothiocarbonyl, cyanomethylsulfonamide, (3-amino-4-cyano)pyrazol-4-yl, etc.; R5, R6 = H, Me; R7 = H, CHO, Cl; R8 = Ph, 3,4-dihydroxyphenyl, 4-iodophenylamino, 3-chlorophenylamino, etc.; R9 = H, Me, OMe; R10 = H, OMe; R11 = H, Cl; R12 = 3-chlorophenylamino, 4-methylphenylmercapto, 4-iodophenylamino, 3-hydroxyphenylamino], were prepared as modulators of KDR/FLK-1 receptor signal transduction useful to regulate and/or modulate vasculogenesis and angiogenesis. Thus, 3,5-di-tert-butyl-4-hydroxybenzaldehyde, thiocyanacetamide, and  $\beta$ -alanine were refluxed 6 h in EtOH to give (E)-2-aminothiocarbonyl-3-(3,5-di-tert-butyl-4-hydroxyphenyl)acrylonitrile. The latter showed IC50 = 0.8  $\mu$ M in an in vitro FLK-1R ELISA assay.

ACCESSION NUMBER: 1999:718981 CAPLUS  
DOCUMENT NUMBER: 131:322425  
TITLE: Preparation of phenylacrylonitriles, quinoxalines, quinoxalines, and related compounds as modulators of tyrosine kinase signal transduction  
INVENTOR(S): App, Harald; McMahon, Gerald M.; Tang, Peng Cho; Gazit, Aviv; Levitzki, Alexander  
PATENT ASSIGNEE(S): Yissum Research Development Company of the Hebrew University of Jerusalem, Israel; Sugan, Inc.  
SOURCE: U.S., 21 pp., Cont.-in-part of U.S. 5,712,395.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 7  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5981569	A	19991109	US 1995-463247	19950605
CA 2149298	AA	19940526	CA 1993-2149298	19931115
EP 1378570	A1	20040107	EP 2003-9148	19931115

L18 ANSWER 9 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE  
 US 6177401 B1 20010123 US 1994-193829 19940209  
 US 5712395 A 19980127 US 1995-386021 19950209  
 PRIORITY APPLN. INFO.: US 1992-975750 B2 19921113  
 US 1993-38596 B2 19930326  
 US 1994-193829 A2 19940209  
 US 1995-386021 A2 19950209  
 EP 1994-900810 A3 19931115

OTHER SOURCE(S): MARPAT 131:322425  
 IT 3216-88-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of phenylacrylonitriles and related compds. as  
 modulators of  
 tyrosine kinase signal transduction)  
 RN 3216-88-4 CAPLUS  
 CN Acetamide, N,N'-1,2-ethanedilybis[2-cyano- (9CI) (CA INDEX NAME)



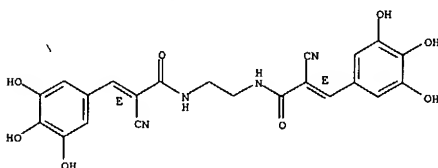
REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR  
 THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

L18 ANSWER 10 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB We have recently presented a new pharmacophore design method that allows  
 for the incorporation of the inherent flexibility of a target active  
 site.  
 The flexibility of the enzymic system is described by collecting many  
 conformations of the uncomplexed protein; this ensemble of conformational  
 states can come from a mol. dynamics (MD) simulation, multiple crystal  
 structures, or many NMR structures. Binding sites for functional groups  
 that complement the active site are determined through multiple-copy  
 calcns.  
 These calcns. are conducted for each protein conformation, providing a  
 large collection of potential binding sites. The Cartesian coordinates  
 from each protein conformation are overlaid through RMS fitting of  
 essential catalytic residues, and the pharmacophore model is described by  
 binding regions that are conserved over many protein conformations.  
 Previously, we developed a "dynamic" pharmacophore model for HIV-1  
 integrase using 11 conformations of the protein from an MD simulation;  
 the  
 MUSIC procedure was used to calculate binding positions for methanol  
 mol. in  
 each configuration of the active site. Here we present "static"  
 pharmacophore models developed with a single conformation of the protein  
 from two new crystal structures (standard protocol for multiple-copy  
 methods).  
 The static models do not perform as well as the previous dynamic model in  
 fitting known inhibitors of HIV-1 integrase. To test the applicability  
 of  
 the dynamic pharmacophore method and the assumption that any reliable  
 source of protein conformations is applicable, we have now developed a  
 second dynamic pharmacophore model based on the two crystal structures  
 also used for the development of the static models. Though the dynamic  
 model based on the two crystal structures does not fit as many known  
 inhibitors as the previous dynamic model, it is a significant improvement  
 over the static models. Even better performance is expected with the  
 addition of new crystal structures as they become available. However, it  
 is  
 notable that using only two structures leads to great improvement in the  
 models.

ACCESSION NUMBER: 1999:619821 CAPLUS  
 DOCUMENT NUMBER: 132:109  
 TITLE: Method for Including the Dynamic Fluctuations of a  
 Protein in Computer-Aided Drug Design  
 AUTHOR(S): Carlsson, Heather A.; Masukawa, Kevin M.; McCammon, J.  
 Andrew  
 CORPORATE SOURCE: Department of Chemistry and Biochemistry Department  
 of  
 Pharmacology, University of California San Diego, La  
 Jolla, CA, 92093-0365, USA  
 SOURCE: Journal of Physical Chemistry A (1999), 103(49),  
 10213-10219  
 CODEN: JPCAFH; ISSN: 1089-5639  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 251320-64-6 251320-67-9  
 RL: PRP (Properties); THU (Therapeutic use); BIOL (Biological study);  
 USES  
 (Uses)  
 (method for including dynamic fluctuations of a protein in  
 computer-aided drug design)

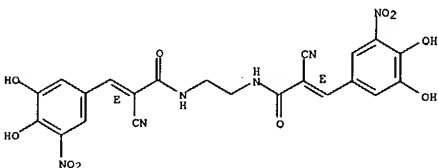
L18 ANSWER 10 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 RN 251320-64-6 CAPLUS  
 CN 2-Propenamide, N,N'-1,2-ethanedilybis[2-cyano-3-(3,4,5-trihydroxyphenyl)-,  
 (2E,2'E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



RN 251320-67-9 CAPLUS  
 CN 2-Propenamide, N,N'-1,2-ethanedilybis[2-cyano-3-(3,4-dihydroxy-5-nitrophenyl)-, (2E,2'E)- (9CI) (CA INDEX NAME)

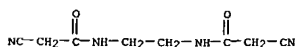
Double bond geometry as shown.



REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR  
 THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

L18 ANSWER 11 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Polar multilayer films of syndioregic nonlinear optical polymers were  
 made  
 using Langmuir-Blodgett-Kuhn (LBK) deposition of a polymeric salt formed  
 at the water surface from two complementary polymers (a polycation insol.  
 in water and a water-soluble polyanion). Polymers were prepared by  
 condensation of monomers 3,5-bis(N-ethyl-N-formylphenylaminomethyl)phenol  
 and 1,2-ethylenediamine-bis-cyanoacetamide and of 2,6-dimethyl-3,5-  
 pyridine diacetonitrile with 4,4'-(1,2-ethanedilybis[(2-  
 hydroxyethyl)imino]bis-benzaldehyde. Noncentrosym. order in the  
 deposited films is maintained primarily by ionic and hydrogen bonding.  
 An  
 important advantage of using LBK technique to produce all-polymeric  
 nonlinear optical films is it allows polymers to be processed near room  
 temperature thus avoiding the disordering and degrading effects seen in  
 high  
 temperature elec. field poling. In addition, the LBK technique offers  
 control over  
 film thickness to within one monolayer and materials may be  
 precisely located within the film to control properties for purposes such  
 as phase matching of the fundamental and second harmonic waveguide modes.  
 A well-known limitation, the long-standing problem of low thermal  
 structural stability of LBK films, may be solved by using high Tg  
 polymers. However, a serious limitation of LBK technique remains;  
 namely,  
 the long processing time required to build up films of sufficient  
 thickness (>0.5 μm) for waveguiding. In principle, the pairwise  
 deposition technique will increase the rate of film thickness growth.

ACCESSION NUMBER: 1998:618051 CAPLUS  
 DOCUMENT NUMBER: 129:316959  
 TITLE: Nonlinear optical films from pairwise-deposited  
 semionomeric syndioregic polymers  
 AUTHOR(S): Roberts, M. J.; Stenger-Smith, J. D.; Zarras, P.;  
 Hollins, R. A.; Nadler, M.; Chafin, A. P.; Wynne, K.  
 J.; Lindsay, G. A.  
 CORPORATE SOURCE: NAWC, Research and Technology Group, China Lake, CA,  
 93555-6100, USA  
 SOURCE: ACS Symposium Series (1998), 695(Organic Thin Films),  
 267-287  
 CODEN: ACSMCS; ISSN: 0097-6156  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 3216-88-4P, 1,2-Ethylenediamine-bis-cyanoacetamide  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (monomer; nonlinear optical films from pairwise-deposited  
 semi-ionomeric syndioregic polyamide-polyamine salts)  
 RN 3216-88-4 CAPLUS  
 CN Acetamide, N,N'-1,2-ethanedilybis[2-cyano- (9CI) (CA INDEX NAME)



IT 214677-16-4P, 3,5-Bis(N-ethyl-N-formylphenylaminomethyl)phenol-1,2-  
 ethylenediamine-bis-cyanoacetamide copolymer, lithium salt  
 214677-17-5P, 3,5-Bis(N-ethyl-N-formylphenylaminomethyl)phenol-1,2-

L18 ANSWER 11 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 ethylenediamine-bis-cyanoacetamide copolymer, 'sru, lithium salt  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties);  
 SPN (Synthetic preparation); PREP (Preparation); PROC (Process)  
 (nonlinear optical films from pairwise-deposited semi-ionomeric  
 syndioregic polyamide-polyamine salts)  
 RN 214677-16-4 CAPLUS  
 CN Acetamide, N,N'-1,2-ethanediylbis(2-cyano-, polymer with  
 4,4'-[[(5-hydroxy-1,3-phenylene)bis[methylene(ethylimino)]]bis[benzaldehyde  
 ], lithium salt (9CI) (CA INDEX NAME)

CM 1

CRN 214677-15-3

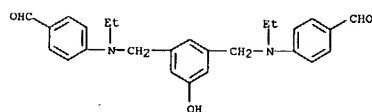
CMF (C26 H28 N2 O3 . C8 H10 N4 O2)x

CCI PMS

CM 2

CRN 211060-89-8

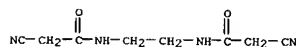
CMF C26 H28 N2 O3



CM 3

CRN 3216-88-4

CMF C8 H10 N4 O2



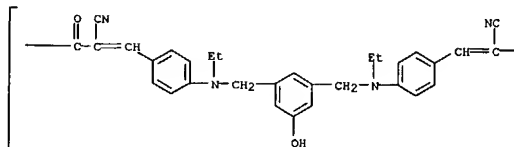
RN 214677-17-5 CAPLUS

CN Poly[imino-1,2-ethanediylimino(2-cyano-1-oxo-2-propene-1,3-diyl)-1,4-

phenylene(ethylimino)methylene(5-hydroxy-1,3-propanediyl)methylene(ethylimino)-1,4-phenylene(2-cyano-3-oxo-1-propene-1,3-diyl)], lithium salt (9CI)  
 (CA INDEX NAME)

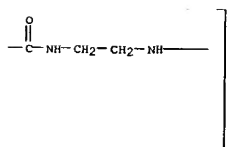
L18 ANSWER 11 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



•x L1

PAGE 1-B



IT 211060-95-6F, 3,5-Bis(N-ethyl-N-formylphenylaminomethyl)phenol-1,2-  
 ethylenediamine-bis-cyanoacetamide copolymer, 'sru 214677-15-3F,  
 3,5-Bis(N-ethyl-N-formylphenylaminomethyl)phenol-1,2-ethylenediamine-bis-  
 cyanoacetamide copolymer  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (nonlinear optical films from pairwise-deposited semi-ionomeric  
 syndioregic polyamide-polyamine salts)

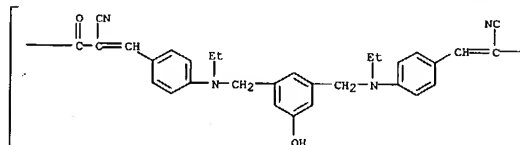
RN 211060-95-6 CAPLUS

CN Poly[imino-1,2-ethanediylimino(2-cyano-1-oxo-2-propene-1,3-diyl)-1,4-

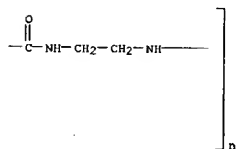
phenylene(ethylimino)methylene(5-hydroxy-1,3-propanediyl)methylene(ethylimino)-1,4-phenylene(2-cyano-3-oxo-1-propene-1,3-diyl)] (9CI) (CA INDEX NAME)

L18 ANSWER 11 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

PAGE 1-A



PAGE 1-B



RN 214677-15-3 CAPLUS

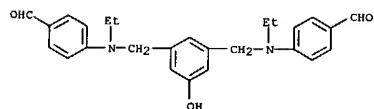
CN Acetamide, N,N'-1,2-ethanediylbis[2-cyano-, polymer with

4,4'-[(5-hydroxy-1,3-phenylene)bis[methylene(ethylimino)]]bis[benzaldehyde  
 ] (9CI) (CA INDEX NAME)

CM 1

CRN 211060-89-8

CMF C26 H28 N2 O3

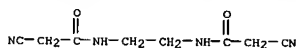


CM 2

CRN 3216-88-4

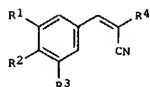
CMF C8 H10 N4 O2

L18 ANSWER 11 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

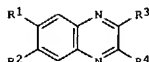


REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR  
 THIS

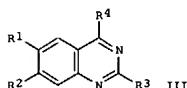
FORMAT RECORD. ALL CITATIONS AVAILABLE IN THE RE



I



II



III

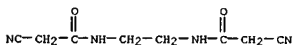
AB The title compds. [I, (R1 = iPr, tBu, I, etc.; R2 = OH; R3 = iPr, tBu, OH, etc.; R4 = (1-phenyl)-n-propylaminocarbonyl, cyanomethylsulfonyl, etc.), II (R1, R2 = Me, H; R1R2 = benzo; R3 = H, CHO, Cl; R4 = Ph, 3,4-(HO)2C6H4, (4-IC6H4)NH, etc.), III (R1 = MeO, Me, H; R2 = MeO; R3 = H, Cl; R4 = (3-ClC6H4)NH, (4-MeC6H4)S, (4-IC6H4)NH, etc.), etc.], capable of modulating tyrosine kinase signal transduction and particularly KDR/FLK-1 receptor signal transduction in order to regulate and/or modulate vasculogenesis and angiogenesis, were prepared. Thus, reaction of 3,5-di-tert-butyl-4-hydroxybenzaldehyde with thiocyanacetamide and  $\beta$ -alanine in EtOH afforded 54% (E)-I (R1, R3 = tBu; R2 = OH; R4 = C(S)NH2) which showed IC50 of 0.8  $\mu$ M against protein tyrosine kinase at the FLK-1 receptor. The invention is based, in part, on the demonstration that KDR/FLK-1 tyrosine kinase receptor expression is associated with endothelial cells and the identification of vascular endothelial growth factor (VEGF) as the high affinity ligand of FLK-1. These results indicate a major role for KDR/FLK-1 in the signaling system during vasculogenesis and angiogenesis. Engineering of host cells that express FLK-1 and the uses of expressed FLK-1 to evaluate and screen for drugs and analogs of VEGF involved in FLK-1 modulation by either agonist or antagonist activities is also described. The invention also relates to the use of the disclosed compds. in the treatment of disorders, including cancer, diabetes, diabetic retinopathy, rheumatoid arthritis, hemangioma and Kaposi's sarcoma, which are related to vasculogenesis and angiogenesis.

ACCESSION NUMBER: 1998:545399 CAPLUS  
DOCUMENT NUMBER: 129:175652  
TITLE: Preparation of quinazolines, quinoxalines and phenylacrylonitriles capable of modulating tyrosine kinase signal transduction and particularly KDR/FLK-1 receptor signal transduction

IT 3216-88-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of quinazolines, quinoxalines and phenylacrylonitriles capable of modulating tyrosine kinase signal transduction and particularly KDR/FLK-1 receptor signal transduction)

RN 3216-88-4 CAPLUS  
CN Acetamide, N,N'-1,2-ethanedilylbis(2-cyano- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 77 THERE ARE 77 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT

L18 ANSWER 12 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

INVENTOR(S): App, Harald; McMahon, Gerald M.; Tang, Peng Cho; Gazit, Aviv; Levitzki, Alexander  
PATENT ASSIGNEE(S): Sugan, Inc.; USA: Yissum Research Development Co. of the Hebrew University of Jerusalem  
SOURCE: U.S., 20 pp., Cont.-in-part of U. S. 5,712,395.  
CODEN: USXXAM

DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 7  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5792771	A	19980811	US 1995-462391	19950605
CA 2149298	AA	19940526	CA 1993-2149298	19931115
EP 1378570	A1	20040107	EP 2003-9148	19931115
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
IE US 6177401	BI	20010123	US 1994-193829	19940209
US 5712395	A	19980127	US 1995-386021	19950209
PRIORITY APPLN. INFO.:			US 1992-975750	B2 19921113
			US 1993-38596	B2 19930326
			US 1994-193829	A2 19940209
			US 1995-386021	A2 19950209
			EP 1994-900810	A3 19931115

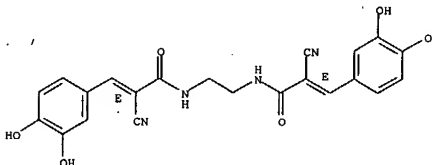
OTHER SOURCE(S): MARPAT 129:175652

IT 168835-84-5P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of quinazolines, quinoxalines and phenylacrylonitriles capable of modulating tyrosine kinase signal transduction and particularly KDR/FLK-1 receptor signal transduction)

RN 168835-84-5 CAPLUS  
CN 2-Propenamide, N,N'-1,2-ethanedilylbis(2-cyano-3-(3,4-dihydroxyphenyl)-, (2E,2'E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



AB Polarized films are described which comprise asym. chromophores linked head-to-head by alternating two different kinds of bridging groups. One of the bridging groups contains one or more ionic groups, and the other of the bridging groups contains one or more non-ionic, hydrophilic groups. The chromophores may be nonlinear optical chromophores. Langmuir-Blodgett (LB) film deposition methods are also described in which a layer of a nonaq. solution of one polymer is spread on a subphase of an aqueous solution of the other in a Langmuir-Blodgett trough, a mol. bilayer of the two polymers is allowed to form by waiting 1-60 min, and the bilayer is then compressed while maintaining a gas-liquid surface pressure of 20-90 of the min pressure required to collapse the bilayer; a multilayered film may then be formed by repeated dipping of a substrate. An electrooptical film which has never undergone elec.-field poling nor high temperature treatment may be produced. This eliminates the dilution effect of the long hydrophobic alkyl groups, and creates stronger ionic bonds between the polymer chains and reduces the time to make a film of a given thickness by at least half by virtue of depositing two polymer layers per stroke.

ACCESSION NUMBER: 1998:527389 CAPLUS  
DOCUMENT NUMBER: 129:167911  
TITLE: Nonlinear optical films from pairwise-deposited semi-ionic syndiotactic polymers  
INVENTOR(S): Lindsay, Geoffrey A.; Wynne, Kenneth J.; Smith, John D.; Stenger, Chafin, Andrew P.; Hollins, Richard A.; Roberts, Marion J.; Zaras, Peter  
PATENT ASSIGNEE(S): United States Dept. of the Navy, USA  
SOURCE: PCT Int. Appl., 51 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

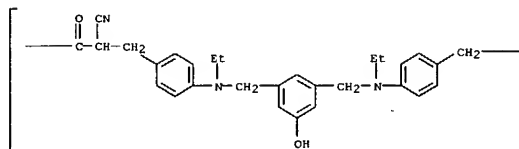
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9832813	A1	19980730	WO 1997-US23990	19971222
W: JP, KP				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
SE US 5882785	A	19990316	US 1997-800943	19970123
PRIORITY APPLN. INFO.:			US 1997-800943	A 19970123

IT 211060-90-1P

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)  
(nonlinear optical films from pairwise-deposited semi-ionic syndiotactic polymers)

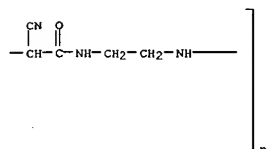
RN 211060-90-1 CAPLUS  
CN Poly(imino-1,2-ethanedilylimino(2-cyano-1-oxo-1,3-propanediyl)-1,4-phenylene(ethylimino)methylene(5-hydroxy-1,3-phenylene)methylene(ethylimino)-1,4-phenylene(2-cyano-3-oxo-1,3-propanediyl)), lithium salt (9CI) (CA INDEX NAME)

PAGE 1-A



●x LI

PAGE 1-B

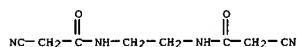


IT 3216-88-4

RL: RCT (Reactant); RACT (Reactant or reagent)  
(nonlinear optical films from pairwise-deposited semionomeric  
syndioregic polymers)

RN 3216-88-4 CAPLUS

CN Acetamide, N,N'-1,2-ethanediylbis[2-cyano- (9CI) (CA INDEX NAME)]



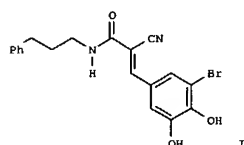
IT 211060-95-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(nonlinear optical films from pairwise-deposited semionomeric  
syndioregic polymers)

RN 211060-95-6 CAPLUS

CN Poly[imino-1,2-ethanediylimino(2-cyano-1-oxo-2-propene-1,3-diyl)-1,4-  
phenylene(ethylimino)methylene(5-hydroxy-1,3-propanediyl)methylene(ethylim

L18 ANSWER 14 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



AB Title compds., e.g., (E)-HOZCH:CR4CN (R4 = CONHR, SO2CH2CN, etc.; R =  
alkyl, etc.; Z = 2-substituted-1,4-phenylene, 2,6-disubstituted-1,4-  
phenylene), capable of modulating tyrosine kinase signal transduction and  
particularly KDR/FLK-1 receptor signal transduction in order to regulate  
and/or modulate vasculogenesis and angiogenesis, were prepared. Thus,  
5-iodovanillin was condensed with Ph(CH2)3NHCOCH2CN to give, after  
O-demethylation, title compound I. Data for biol. activity of title  
compds.

Were given:

ACCESSION NUMBER: 1998:405435 CAPLUS  
DOCUMENT NUMBER: 129:54393

TITLE: Preparation of compounds for the treatment of  
disorders related to vasculogenesis and/or  
angiogenesis

INVENTOR(S): App, Harald; McMahon, Gerald M.; Tang, Peng Cho;  
Gazit, Aviv; Levitzki, Alexander

PATENT ASSIGNEE(S): Sugen, Inc., USA; Yissum Research Development  
SOURCE: U.S., 19 pp.; Cont.-in-part of U.S. 5,712,395.

CODEN: USXXNM

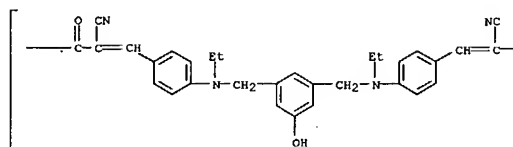
DOCUMENT TYPE: Patent  
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 7  
PATENT INFORMATION:

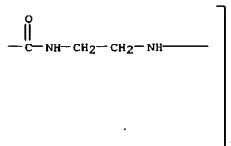
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5763441	A	19980609	US 1995-462046	19950605
CA 2149298	AA	19940526	CA 1993-2149298	19931115
EP 1378570	A1	20040107	EP 2003-9148	19931115
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
IE US 6177401	B1	20010123	US 1994-193829	19940209
US 5712395	A	19980127	US 1995-386021	19950209
PRIORITY APPLN. INFO.:				
			US 1992-975750	B2 19921113
			US 1993-38596	B2 19930326
			US 1994-193829	A2 19940209
			US 1995-386021	A2 19950209
			EP 1994-900810	A3 19931115

ino)-1,4-phenylene(2-cyano-3-oxo-1-propene-1,3-diyl)] (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



REFERENCE COUNT:

7

FORMAT

THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE

L18 ANSWER 14 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

OTHER SOURCE(S): MARPAT 129:54393

IT 168835-84-5P

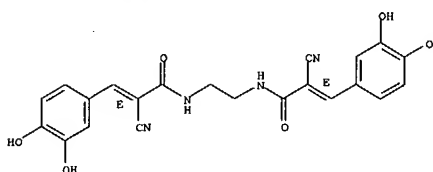
RL: BAC (Biological activity or effector, except adverse); BSU  
(Biological

study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);  
BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of compds. for the treatment of disorders related to  
vasculogenesis and/or angiogenesis)

RN 168835-84-5 CAPLUS

CN 2-Propenamide, N,N'-1,2-ethanediylbis[2-cyano-3-(3,4-dihydroxyphenyl)-,  
(2E,2'E)- (9CI) (CA INDEX NAME)]

Double bond geometry as shown.



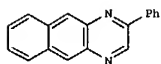
REFERENCE COUNT:

84

THIS

THERE ARE 84 CITED REFERENCES AVAILABLE FOR  
RECORD. ALL CITATIONS AVAILABLE IN THE RE

FORMAT



AB The invention relates to a wide variety of organic mols. capable of modulating tyrosine kinase signal transduction, and particularly KDR/FLK-1 receptor signal transduction, in order to regulate and/or modulate vasculogenesis and angiogenesis. The invention is based, in part, on the demonstration that KDR/FLK-1 tyrosine kinase receptor expression is associated with endothelial cells, and the identification of vascular endothelial growth factor (VEGF) as the high-affinity ligand of FLK-1. These results indicate a major role for KDR/FLK-1 in the signaling system during vasculogenesis and angiogenesis. Engineering of host cells that express FLK-1 and the uses of expressed FLK-1 to evaluate and screen for drugs and analogs of VEGF involved in FLK-1 modulation by either agonist or antagonist activities is also described. The invention also relates to the use of the disclosed compds. in the treatment of disorders, including cancer, diabetes, hemangioma and Kaposi's sarcoma, which are related to vasculogenesis and angiogenesis. Examples include preps. of about 30 title compds., and a variety of bioassays. For instance, cyclocondensation of 2,3-diaminonaphthalene with phenylglyoxal in refluxing EtOH gave 65% of the claimed title compound 2-phenyl-1,4-diazanthracene (I). The latter compound gave 41% inhibition of growth

of Calu-6 human lung cancer xenografts in immunocompetent mice when given at a rate of 20 mg/kg/day.

ACCESSION NUMBER: 1998:115367 CAPLUS  
DOCUMENT NUMBER: 128:154102  
TITLE: Quinazolines, quinoxalines, acrylonitriles, and other compounds for the treatment of disorders related to vasculogenesis and/or angiogenesis  
INVENTOR(S): App, Harald; McMahon, Gerald M.; Tang, Peng Chao; Gazit, Aviv; Levitzki, Alexander  
PATENT ASSIGNEE(S): Yissum Research Development Corp., Israel; Sugen  
SOURCE: U.S., 16 pp., Cont.-in-part of U.S. Ser. No. 193,829, abandoned.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 7  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5712395	A	19980127	US 1995-386021	19950209
CA 2149298	AA	19940526	CA 1993-2149298	19931115
EP 1378570	A1	20040107	EP 2003-9148	19931115

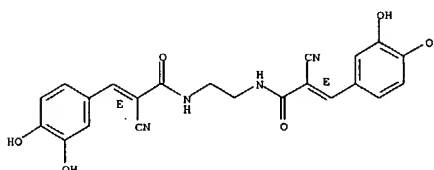
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

IE

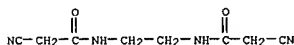
L18 ANSWER 15 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
US 6177401 B1 20010123 US 1994-193829 19940209  
US 5763441 A 19980609 US 1995-462046 19950605  
US 5792771 A 19980811 US 1995-462391 19950605  
US 5981569 A 19991109 US 1995-463247 19950605  
US 5849742 A 19981215 US 1997-853239 19970509  
PRIORITY APPLN. INFO.: US 1992-975750 B2 19921113  
US 1993-38596 B2 19930326  
US 1994-193829 B2 19940209  
EP 1994-900810 A3 19931115  
US 1995-386021 A2 19950209

OTHER SOURCE(S): MARPAT 128:154102  
IT 168835-84-5P  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of quinazolines, quinoxalines, acrylonitriles, and other compds. as vasculogenesis and/or angiogenesis inhibitors)  
RN 168835-84-5 CAPLUS  
CN 2-Propenamide, N,N'-1,2-ethanediybis(2-cyano-3-(3,4-dihydroxyphenyl))- (2E,2'E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IT 3216-88-4  
RL: RCT (Reactant); RACT (Reactant or reagent) (preparation of quinazolines, quinoxalines, acrylonitriles, and other compds. as vasculogenesis and/or angiogenesis inhibitors)  
RN 3216-88-4 CAPLUS  
CN Acetamide, N,N'-1,2-ethanediybis(2-cyano- (9CI) (CA INDEX NAME)

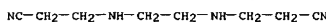


REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L18 ANSWER 16 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Title only translated.  
ACCESSION NUMBER: 1997:765725 CAPLUS  
DOCUMENT NUMBER: 127:348703  
TITLE: Aqueous polymer-containing solution for lubrication and cooling in metalworking  
INVENTOR(S): Shapoval, Josif Mikhajlovich; Lininskaya, Elena Dmitrievna; Kulikov, Vladimir N.; Pashkov, Mikhail A.; Khaber, Nikola Vasilevich; Kurganskij, Vladimir Sergeevich; Baran, Miroslav Mikhajlovich  
PATENT ASSIGNEE(S): Voennaya Chast 35533, Russia  
SOURCE: Russ. From: Izobreteniya 1997, (20), 266.  
CODEN: RUXKE7  
DOCUMENT TYPE: Patent  
LANGUAGE: Russian  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2084497	C1	19970720	RU 1992-5039402	19920304
			SU 1992-5039402	19920304

IT 3217-00-3, N,N'-Bis(2-cyanoethyl)ethylenediamine  
RL: MOA (Modifier or additive use); USES (Uses) (in metalworking; aqueous polymer-containing solution for lubrication and cooling in metalworking)  
RN 3217-00-3 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



L18 ANSWER 17 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Mid-UV dyes for ultrathin antireflection coatings for multilayer i-line photoetching are produced from bichalcones, bis-acyanoacrylates/biscyanoacrylamides, and 1,4-divinylbenzenes. The dyes are nonsubliminal and differentially insol. in standard photoresist solvents.

ACCESSION NUMBER: 1997:752789 CAPLUS  
 DOCUMENT NUMBER: 128:55406  
 TITLE: Nonsubliming mid-UV dyes for ultrathin organic antireflection coatings having differential

solubility

INVENTOR(S): Meador, Jim D.; Shao, Xie; Krishnamurthy, Vandana; Murphy, Earnest C.; Flaim, Tony D.; Brewer, Terry Lowell

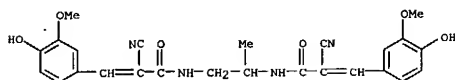
PATENT ASSIGNEE(S): Brewer Science, Inc., USA  
 SOURCE: U.S., 10 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5688987	A	19971118	US 1994-336340	19941109
US 5892096	A	19990406	US 1996-598711	19960208
			US 1994-336340	19941109

PRIORITY APPLN. INFO.: MARPAT 128:55406

OTHER SOURCE(S):  
 IT 200007-38-1  
 RL: TEM (Technical or engineered material use); USES (Uses) (mid-UV dye for antireflection coatings for photolithog.)

RN 200007-38-1 CAPLUS  
 CN 2-Propenamide, N,N'-1,2-ethanediylbis[2-cyano-3-(4-hydroxy-3-methoxyphenyl)- (9CI) (CA INDEX NAME)]



L18 ANSWER 18 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Cyanocinnamamides, useful as UV absorbers (no data), are prepared in high yield by condensing an cyanoacetamide with an aryl carbonyl-containing compound in the presence of a catalyst. Thus, hexamethylene biscyanoacetamide (prepared from the reaction of hexamethylenediamine with Me cyanoacetate) was condensed with benzophenone in refluxing PhMe in the presence of ammonium acetate and AcOH, producing hexamethylene bis(2-cyano-3-phenyl)cinnamamide (m.p. 232-233°) in 81.7% yield.

ACCESSION NUMBER: 1997:527788 CAPLUS  
 DOCUMENT NUMBER: 127:205355  
 TITLE: Process for the production of cyanocinnamamides from the condensation of aryl carbonyl compounds with cyanoacetamides

INVENTOR(S): Qian, Zhenrong; Su, Heng; Mathew, Chempolil Thomas  
 PATENT ASSIGNEE(S): AlliedSignal Inc., USA  
 SOURCE: U.S., 6 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

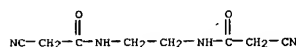
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5654465	A	19970805	US 1996-729213	19961015
CA 2268392	AA	19980423	CA 1997-2268392	19970925
WO 9816501	A1	19980423	WO 1997-US17226	19970925
W: AL, AU, BB, BG, BR, CA, CN, CU, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
EP 934256	B1	19990811	EP 1997-943581	19970925
EP 934256	B1	20020821		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, NL, SE, PT, IE, SI, LT, LV, FI, RO				
JP 2001502324	T2	20010220	JP 1998-518364	19970925
AT 222582	E	20020915	AT 1997-943581	19970925
TW 530042	B	20030501	TW 1997-86114246	19970930
KR 2000049075	A	20000725	KR 1999-703149	19990412
			US 1996-729213	A 19961015
PRIORITY APPLN. INFO.:			WO 1997-US17226	W 19970925

OTHER SOURCE(S): CASREACT 127:205355; MARPAT 127:205355

IT 3216-88-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (process for the production of cyanocinnamamides from the condensation of aryl carbonyl compds. with cyanoacetamides)

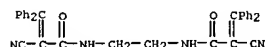
RN 3216-88-4 CAPLUS  
 CN Acetamide, N,N'-1,2-ethanediylbis[2-cyano- (9CI) (CA INDEX NAME)]

L18 ANSWER 18 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



IT 194606-01-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (process for the production of cyanocinnamamides from the condensation of aryl carbonyl compds. with cyanoacetamides)

RN 194606-01-4 CAPLUS  
 CN 2-Propenamide, N,N'-1,2-ethanediylbis[2-cyano-3,3-diphenyl- (9CI) (CA INDEX NAME)]



L18 ANSWER 19 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB A method for producing an addition reaction compound (e.g., NCCCH2CHETNCH2CH2NCH2CH2CN) comprises adding a mono- or diamine compound (e.g., 1,2-diaminoethane) to an α,β-unsatd. compound having a nitrile (e.g., cis-2-pentenitrile), carboxyl, sulfonyl, carbamoyl or nitro group in the presence of an inorg. salt or oxide of a rare earth metal (e.g., LaCl3).

ACCESSION NUMBER: 1997:464926 CAPLUS  
 DOCUMENT NUMBER: 127:81161  
 TITLE: Method and catalysts for producing addition reaction products of amines and α,β-unsaturated compounds

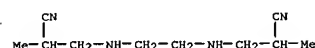
INVENTOR(S): Inaba, Tadashi; Okada, Hisashi; Suzuki, Ryo  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 18 pp.  
 CODEN: EPKXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 775688	A1	19970528	EP 1996-118532	19961119
EP 775688	B1	20000405		
R: BE, CH, DE, FR, GB, LI, NL				
JP 09143132	A2	19970603	JP 1995-302532	19951121
			JP 1995-302532	19951121

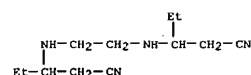
PRIORITY APPLN. INFO.: CASREACT 127:81161; MARPAT 127:81161

IT 85135-00-8P 137621-37-5P 183151-48-6P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of amino nitriles by lanthanide compound catalyzed addition of amines and unsatd. nitriles)

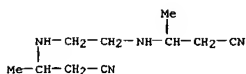
RN 85135-00-8 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyl-diimino)bis[2-methyl- (9CI) (CA INDEX NAME)]



RN 137621-37-5 CAPLUS  
 CN Pentanenitrile, 3,3'-(1,2-ethanediyl-diimino)bis- (9CI) (CA INDEX NAME)



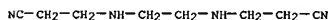
RN 183151-48-6 CAPLUS  
 CN Butanenitrile, 3,3'-(1,2-ethanediyl-diimino)bis- (9CI) (CA INDEX NAME)



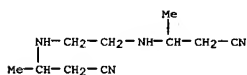
L18 ANSWER 20 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB M3O2CL3NC[W1D]v[W2]wN(L2CO2M2)(L4CO2M4) [D = single bond, O, S, NRw: Rw = H, aliphatic hydrocarbonyl, aryl, heterocyclyl; G = [L5]nCR1R2(L1)mcO2M1, aryl, heterocyclyl; R1 = aliphatic hydrocarbonyl; aryl, heterocyclyl; R2 = H, OH, CO2H; L1-L5 = alkylene; M1 - M4 = H, cation; W1, W2 = alkylene, arylene, aralkylene, N-containing heterocyclylene; m, n = 0, 1; v = 0-3; w = 1-3], useful as metal ion-sequestering agents or intermediates for oxidizing agents (no data), are prepared by treating G1NH(W1D)v[W2]wNH2 or G1NH(W1D)v[W2]wNH2Q2 (G1 = [L5]nCR1R2(L1)mcO2M1, aryl, heterocyclyl; Q1, Q2 = CO2H, cyano; D, R1, R2, L1, L2, L5, W1, W2, m, n, v, w = same as above) with HCN, cyanides, or  $\alpha$ -hydroxy nitriles. H2NCH2CH2NH2 was treated with cis-2-pentenitrile under reflux for 24 h to give 67% adduct, which was mixed with NaCN and NaOH in H2O, treated with HCHO at  $\leq 10^\circ$ , and acidified with H2SO4 to give 95% HO2CCH2CH2N(CH2CO2H)CH2CH2N(CH2CO2H)CH2CH2CO2H.  
 ACCESSION NUMBER: 1997:449008 CAPLUS  
 DOCUMENT NUMBER: 127:66220  
 TITLE: Preparation of amino polycarboxylic acids as metal ion-sequestering agents or oxidizing agent intermediates  
 INVENTOR(S): Inaba, Tadashi; Okada, Hisashi  
 PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 38 pp.  
 CODEN: JKKXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09124566	A2	19970513	JP 1995-303347	19951030
PRIORITY APPLN. INFO.:				
			JP 1995-303347	19951030

OTHER SOURCE(S): CASREACT 127:66220; MARPAT 127:66220  
 IT 3217-00-3 183151-48-6  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of amino polycarboxylic acids from ethylenediamines and HCN, cyanides, or  $\alpha$ -hydroxy nitriles)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)

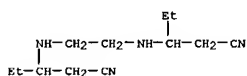


RN 183151-48-6 CAPLUS  
 CN Butanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)

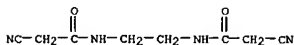


IT 137621-37-5P

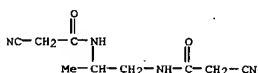
L18 ANSWER 20 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. of amino polycarboxylic acids from ethylenediamines and HCN, cyanides, or  $\alpha$ -hydroxy nitriles)  
 RN 137621-37-5 CAPLUS  
 CN Pentanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



L18 ANSWER 21 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB A preparation of bis-lactams is described from  $\alpha$ -ketols and biscyanamides in the presence of sodium ethoxide at room temperature. One of these compds. leads to an unsatd. derivative by condensation with furfural, or to a saturated analog via catalytic hydrogenation.  
 ACCESSION NUMBER: 1997:312175 CAPLUS  
 DOCUMENT NUMBER: 127:65651  
 TITLE: Synthesis and reactivity of bis-lactamic compounds  
 AUTHOR(S): Alexandre, Christian; Melikian, Gagik; Rouessac, Francis  
 CORPORATE SOURCE: Laboratoire de Synthèse Organique-URA 482 du CNRS, Faculté des Sciences, Université du Maine, Le Mans, F-72017, Fr.  
 SOURCE: Synthetic Communications (1997), 27(11), 1919-1925  
 CODEN: SYNGAV; ISSN: 0039-7911  
 PUBLISHER: Dekker  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 3216-88-4P 26889-90-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (synthesis and reactivity of bis-lactamic compds.)  
 RN 3216-88-4 CAPLUS  
 CN Acetamide, N,N'-1,2-ethanediyldi[2-cyano- (9CI) (CA INDEX NAME)

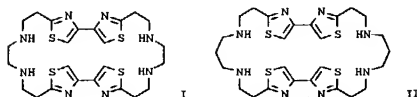


RN 26889-90-7 CAPLUS  
 CN Acetamide, 2-cyano-N-[1-[(cyanoacetyl)amino]methyl]ethyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

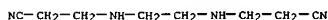




AB The novel heterocyclophanes I and II were readily synthesized by the cyclization of 1,4-dibromobutane-2,3-dione with N,N'-bis(tert-butoxycarbonyl)ethylenediamine-N,N'-dipropionthioamide and N,N'-bis(tert-butoxycarbonyl)-trimethylenediamine-N,N'-dipropionthioamide, resp., followed by acidic deprotection. Under physiol. conditions, I and II at 5  $\mu$ M showed considerable DNA-cleaving activities in the presence of Co(II) without any reducing agent.

ACCESSION NUMBER: 1997:81998 CAPLUS  
DOCUMENT NUMBER: 126:199552  
TITLE: Cyclophanes. VIII. Synthesis and DNA-cleaving activities of novel heterocyclophanes containing two 4,4'-bithiazole rings  
AUTHOR(S): Sasaki, Hideaki; Suehiro, Atsumi; Nakamoto, Yasuyuki  
CORPORATE SOURCE: Fac. Pharm. Sci., Kobe Gakuin Univ., Kobe, 651-21, Japan  
SOURCE: Chemical & Pharmaceutical Bulletin (1997), 45(1), 189-193  
CODEN: CPBTAL; ISSN: 0009-2363  
PUBLISHER: Pharmaceutical Society of Japan  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 3217-00-3

RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation and DNA-cleaving activity of octaazahexaaxahexatriaccontane and octaazahexaaxaotriacontane)  
RN 3217-00-3 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)

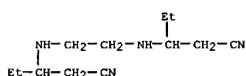


REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

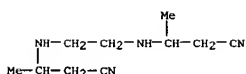
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08231480	A2	19960910	JP 1995-60107	19950224

PRIORITY APPLN. INFO.: JP 1995-60107 19950224

OTHER SOURCE(S): MARPAT 125:328102  
IT 137621-37-5P 183151-48-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of alkylenediaminetetrakis(alkanoic acid) and salts thereof as chelating agents)  
RN 137621-37-5 CAPLUS  
CN Pentanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



RN 183151-48-6 CAPLUS  
CN Butanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



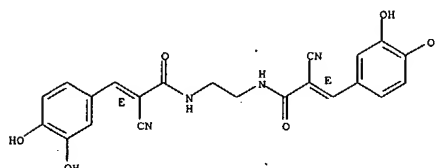
L18 ANSWER 23 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Amino carboxylic acid derivs. M302CCHR3CHR4N(CHR1CO2M1)-W-N(R)CHR2CO2M2 (R = CHR5CO2M1, CHR5CHR6CO2M4; wherein R1 - R6 = H, alkyl, provided that all R1 - R6 = H; M1 - M4 = H, cation) and intermediates thereof are prepared. These compds. are useful as metal ion-blocking agents for medicines, cosmetics, soaps, detergents, cleaning compns., material anal., coatings for metals, plating, catalysts, colloid chemical, photog., and liquid crystals, in particular as intermediates for metal ion-blocking agents and oxidizing agents [e.g. Fe(III)-complex bleaching agents for photosensitive materials] in the field of silver halide photosensitive materials. Thus, 50.0 g ethylenediamine and 223 g crotononitrile were heated under reflux for 20 h, distilled under an aspirator at 20 mmHg and 130-150° and under a vacuum pump at 2 mmHg and 150-170° to give NCCCH2CHMeNHCH2CH2NHCHMeCH2CN. To the latter intermediate (50 g) was added 150 mL concentrated HCl over 15 min under stirring in an ice bath and the resulting mixture was refluxed for 3 h, distilled in vacuo, made strongly alkaline by adding 50% aqueous NaOH with removing formed NH3 under reduced pressure to give NaO2CCH2CHMeNHCH2CH2NHCHMeCH2CO2Na. The whole of the latter intermediate was added to an aqueous solution of 107.3 g BrCH2CO2H neutralized with 50% aqueous NaOH and after stirring thoroughly, left to stand overnight, treated with activated charcoal, filtered through celite, made pH 1.5 with concentrated HCl, desalted by electrodialysis, concentrated in vacuo, left to stand overnight for crystallization, and filtered to give, after washing the crystal with H2O and acetone and drying, 41% HO2CCH2CHMeN(CH2CO2H)CH2CH2N(CH2CO2H)CHMeCH2CO2H.1/2H2O (I). In a test for desilverization, a cellulose triacetate film coated with a gelatin containing 120  $\mu$ g colloidal Ag was immersed for 1 min in a photog. processing liquid containing Fe(III)NO3 0.10, chelating agent I 0.11, NH4Br 0.40, ammonium thiosulfate 1.00 mol/l H2O and washed with H2O. 0.40, ammonium thiosulfate. The residual Ag was 5  $\mu$ g/cm2 and there was no precipitation of S, whereas a reference processing solution containing (HO2CCH2)2N(CH2)3N(CH2CO2H)2 showed the residual Ag of 28  $\mu$ g/cm2 and precipitation of S.  
ACCESSION NUMBER: 1996:687146 CAPLUS  
DOCUMENT NUMBER: 125:328102  
TITLE: Preparation of alkylenediaminetetrakis(alkanoic acid) and salts thereof as chelating agents  
INVENTOR(S): Inaba, Tadashi; Okada, Hisashi  
PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.  
CODEN: JKKXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1

L18 ANSWER 24 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Benzylidenemalononitrile (BMN) tyrphostins were previously found to be potent inhibitors of EGF receptor (EGFR) tyrosine kinase activity. Since these compds. were found to compete for the substrate and sometimes with the ATP site and since EGFR acts as a dimer, the authors prepared a series of dimeric tyrphostins. These dimeric tyrphostins were built from 2 BMN units linked by various spacers and designed to fit the dimeric cross-autophosphorylation signal transduction intermediate of the EGFR tyrosine kinases. The structure-activity relationship of these potent dimeric EGF receptor tyrosine kinase inhibitors was reported.

ACCESSION NUMBER: 1996:681487 CAPLUS  
DOCUMENT NUMBER: 126:42241  
TITLE: Tyrphostins. 6. Dimeric Benzylidenemalononitrile Tyrphostins: Potent Inhibitors of EGF Receptor Tyrosine Kinase in Vitro  
AUTHOR(S): Gazit, Aviv; Osherov, Nir; Gilon, Chaim; Levitzki, Alexander  
CORPORATE SOURCE: Institute of Chemistry and Life Sciences, Hebrew University of Jerusalem, Jerusalem, 91904, Israel  
SOURCE: Journal of Medicinal Chemistry (1996), 39(25), 4905-4911  
CODEN: JMCMAR; ISSN: 0022-2623  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 168835-84-5P, AG 548

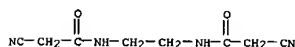
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
(synthesis of dimeric benzylidenemalononitrile tyrphostins and their activity as potent inhibitors of EGF receptor tyrosine kinase in vitro)  
RN 168835-84-5 CAPLUS  
CN 2-Propenamide, N,N'-1,2-ethanediyldiis[2-cyano-3-(3,4-dihydroxyphenyl)-, (2E,2'E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



IT 3216-88-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(synthesis of dimeric benzylidenemalononitrile tyrphostins and their activity as potent inhibitors of EGF receptor tyrosine kinase in vitro)

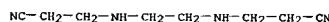
L18 ANSWER 24 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
RN 3216-88-4 CAPLUS  
CN Acetamide, N,N'-1,2-ethanediylbis[2-cyano- (9CI) (CA INDEX NAME)



L18 ANSWER 25 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Title only translated.  
ACCESSION NUMBER: 1996:318357 CAPLUS  
DOCUMENT NUMBER: 124:345584  
TITLE: Heat-insulating glass fiber tissue impregnated with silica-filled carboxylated nitrile rubber latex  
binder containing polyepichlorohydrin and bis(cyanoethyl)ethylenediamine  
INVENTOR(S): Askerov, Mizami G.; Ulukhanov, Ajdyn G.; Kanovich, Mark Z.  
PATENT ASSIGNEE(S): Nauchno-Issledovatel'skij Institut "Elpa", USSR; Firma "Khelipa-Akustokeram"  
SOURCE: Russ. From: Izobreteniya 1995, (27), 191.  
CODEN: RUXXE7  
DOCUMENT TYPE: Patent  
LANGUAGE: Russian  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2044656	C1	19950927	RU 1991-5016280	19911213
PRIORITY APPLN. INFO.:			SU 1991-5016280	19911213

IT 3217-00-3, N,N'-Bis(2-cyanoethyl)ethylenediamine  
RL: MOA (Modifier or additive use); USES (Uses)  
(nitrile rubber latex binder containing; heat-insulating glass fiber tissue impregnated with silica-filled carboxylated nitrile rubber latex binder containing polyepichlorohydrin and bis(cyanoethyl)ethylenediamine)  
RN 3217-00-3 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediylidimino)bis- (9CI) (CA INDEX NAME)

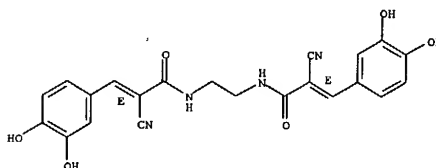


L18 ANSWER 26 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB The present invention relates to organic mols. capable of modulating tyrosine kinase signal transduction and particularly KDR/FLK-1 receptor signal transduction in order to regulate and/or modulate vasculogenesis and angiogenesis. The invention is based, in part, on the demonstration that KDR/FLK-1 tyrosine kinase receptor expression is associated with endothelial cells and the identification of vascular endothelial growth factor (VEGF) as the high affinity ligand of FLK-1. These results indicate a major role for KDR/FLK-1 in the signaling system during vasculogenesis and angiogenesis. Engineering of host cells that express FLK-1 and the use of expressed FLK-1 to evaluate and screen for drugs and analogs of VEGF involved in FLK-1 modulation by either agonist or antagonist activities is also described. The invention also relates to the use of the disclosed compds. in the treatment of disorders, including cancer, diabetes, hemangioma and Kaposi's sarcoma, which are related to vasculogenesis and angiogenesis.  
ACCESSION NUMBER: 1995:849326 CAPLUS  
DOCUMENT NUMBER: 123:246818  
TITLE: Compounds for the treatment of disorders related to vasculogenesis and/or angiogenesis  
INVENTOR(S): Gazit, Aviv; Levitzki, Alexander; App, Harald; Tang, Cho Peng; McMahon, Gerald M.  
PATENT ASSIGNEE(S): Sugen, Inc., USA; Yissum Research Development Company of the Hebrew University  
SOURCE: PCT Int. Appl., 83 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 7  
PATENT INFORMATION:

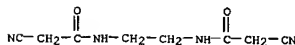
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9521613	A1	19950817	WO 1995-US1751	19950209
W: AM, AU, BB, BG, BR, BV, CA, CH, CZ, EE, FI, GE, HU, JP, KE, KG, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SI, SK, TJ, TT, UA, UZ, VN				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6177401	B1	20010123	US 1994-193829	19940209
AU 9518423	A1	19950829	AU 1995-18423	19950209
EP 748219	A1	19961218	EP 1995-910239	19950209
R: DE, FR, GB				
JP 09508642	T2	19970902	JP 1995-521376	19950209
JP 3202238	B2	20010827		
PRIORITY APPLN. INFO.:			US 1994-193829	A 19940209
			US 1992-975750	B2 19921113
			US 1993-38596	B2 19930326
			WO 1995-US1751	W 19950209

OTHER SOURCE(S): MARPAT 123:246818

L18 ANSWER 26 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
IT 168835-84-5P  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (compds. for the treatment of disorders related to vasculogenesis and/or angiogenesis)  
RN 168835-84-5 CAPLUS  
CN 2-Propenamide, N,N'-1,2-ethanediylbis[2-cyano-3-(3,4-dihydroxyphenyl)-, (2E,2'E)- (9CI) (CA INDEX NAME)  
Double bond geometry as shown.



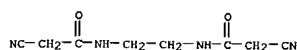
IT 3216-88-4  
RL: RCT (Reactant); RACT (Reactant or reagent) (compds. for the treatment of disorders related to vasculogenesis and/or angiogenesis)  
RN 3216-88-4 CAPLUS  
CN Acetamide, N,N'-1,2-ethanediylbis[2-cyano- (9CI) (CA INDEX NAME)



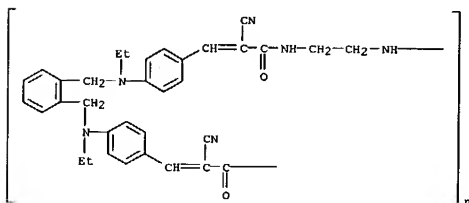


L18 ANSWER 30 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

CM 2  
CRN 3216-88-4  
CMF C8 H10 N4 O2



RN 153033-18-2 CAPLUS  
CN Poly[imino-1,2-ethanediylimino(2-cyano-1-oxo-2-propene-1,3-diyl)-1,4-phenylene(ethylimino)methylene-1,2-phenylenemethylene(ethylimino)-1,4-phenylene(2-cyano-3-oxo-1-propene-1,3-diyl)] (9CI) (CA INDEX NAME)



L18 ANSWER 31 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN

AB Effect of mol. weight on the microphase structure and thermophys. properties is studied for homolog. butoxy-terminated polypropylene glycol-2,4-toluene diisocyanate-cyanoethylated ethylenediamine block rubbers (PEUR), containing oligomeric polypropylene glycol with mol. weight 1000 and differing in the rigid block length. The temperature dependence of the heat capacity of each PEUR has a transition corresponding to the glass transition of the flexible blocks. The average glass transition temps. of PEURs lie in the (224±4) K temperature range, i.e., they are shifted by 11-20 K in the direction of high temps. compared to the glass transition temperature of the rigid blocks. Glass transition temperature and heat capacity of PEURs do not depend on the mol. weight. The dynamic elasticity modulus of the PEURs is studied as a function of mol. weight. Degree of microsegregation and network characteristics are calculated from the x-ray anal. data.

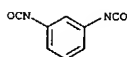
ACCESSION NUMBER: 1993:673174 CAPLUS  
DOCUMENT NUMBER: 119:273174  
TITLE: Effect of molecular weight on the structure and properties of segmented poly(urethane ureas)  
AUTHOR(S): Sinel'nikov, S. I.; Shevchuk, A. V.; Matyushov, V. F.  
CORPORATE SOURCE: Inst. Khim. Vysokomol. Soedin., Kiev, Ukraine  
SOURCE: Kompozitsionnye Polimernye Materialy (1979-1996?) (1992), 52, 21-4  
CODEN: KPMAD8; ISSN: 0203-3275

DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 106849-28-9, Poly(oxy-1,4-butanediyl), .α.-hydro-α.-hydroxy-, polymer with 1,3-diisocyanatomethylbenzene and 3,3'-(1,2-ethanediylidimino)bis[propanenitrile], block  
RL: PRP (Properties)  
(rubber, thermal and mech. properties and microstructure of, effect of mol. weight and rigid segment length on)

RN 106849-28-9 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediylidimino)bis-, polymer with 1,3-diisocyanatomethylbenzene and α-hydro-α-hydroxypoly(oxy-1,4-butanediyl), block (9CI) (CA INDEX NAME)

CM 1

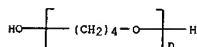
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



D1-Me

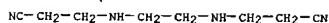
L18 ANSWER 31 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

CM 2  
CRN 25190-06-1  
CMF (C4 H8 O)n H2 O  
CCI PMS



CM 3

CRN 3217-00-3  
CMF C8 H14 N4



L18 ANSWER 32 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN

AB The thermal and mech. properties of semi-interpenetrating networks (SIPN) of crosslinked oligourethane acrylates or oligoether acrylate with bis(2-cyanoethyl)ethylenediamine-poly(tetramethylene glycol)-TDI block rubber were studied with respect to composition and structure. The best properties were observed by SIPNs containing oligourethane acrylates

owing to their good compatibility with the linear block polyurethane and the formation of single domain structure with the polyurethane.  
ACCESSION NUMBER: 1993:651275 CAPLUS  
DOCUMENT NUMBER: 119:251275  
TITLE: Polymeric materials based on a linear polyurethane and oligomeric diacrylates

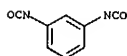
AUTHOR(S): Sinel'nikov, S. I.; Matyushov, V. F.  
CORPORATE SOURCE: Inst. Khim. Vysokomol. Soedin., Kiev, Ukraine  
SOURCE: Kompozitsionnye Polimernye Materialy (1979-1996?) (1992), 52, 7-10  
CODEN: KPMAD8; ISSN: 0203-3275

DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 106849-28-9D, hydroxyethyl methacrylate-terminated  
RL: USES (Uses)

(crosslinked, semi-interpenetrating networks with block polyoxyalkylene-polyurea-polyurethane rubber, thermal and mech. properties of)  
RN 106849-28-9 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediylidimino)bis-, polymer with 1,3-diisocyanatomethylbenzene and α-hydro-α-hydroxypoly(oxy-1,4-butanediyl), block (9CI) (CA INDEX NAME)

CM 1

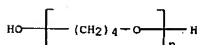
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



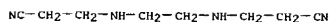
D1-Me

CM 2

CRN 25190-06-1  
CMF (C4 H8 O)n H2 O  
CCI PMS



CM 3

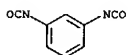
CRN 3217-00-3  
CMF C8 H14 N4

IT 106849-28-9, N,N'-Bis-(2-cyanoethyl)ethylenediamine-  
poly(tetramethylene glycol)-TDI block copolymer  
RL: USES (Uses)  
(rubber, semi-interpenetrating networks with oligourethane acrylates

or oligoether acrylate, thermal and mech. properties of)  
RN 106849-28-9 CAPLUS

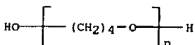
CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis-, polymer with  
1,3-diisocyanatomethylbenzene and  $\alpha$ -hydro- $\alpha$ -hydroxypoly(oxy-  
1,4-butanediyl), block (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS

D1-Me

CM 2

CRN 25190-06-1  
CMF (C4 H8 O)n H2 O  
CCI PMS

CM 3

CRN 3217-00-3  
CMF C8 H14 N4

AB The adhesives are manufactured by reacting tall-oil pitch and  
N,N'-di-( $\beta$ -cyanoethyl)-ethylenediamine-1,2 in (10-12):1 weight ratio at  
120-140°. Strength and water resistance of asphalt concrete using  
the adhesive are improved.

ACCESSION NUMBER: 1993:632581 CAPLUS

DOCUMENT NUMBER: 119:232581

TITLE: Manufacture of adhesives for asphalt concrete  
INVENTOR(S): Kendia, Moisej Sh.; Aminov, Aleksandr M.; Grinberg,  
Mikhail Ya.; Bojko, Vladimir V.; Tanchuk, Yulij V.;  
Matolich, Roman M.; Skikun, Mikhail F.; Pilipuk,  
Rostislav I.; Volyanskiy, Frank V.  
Inst bioorganicheskoy khimii neftekhimii an ussr,

PATENT ASSIGNEE(S): U.S.S.R. From: Izobreteniya 1992, (43), 49.  
USSR CODEN: URXXAF

SOURCE: U.S.S.R. From: Izobreteniya 1992, (43), 49.

DOCUMENT TYPE: Patent

LANGUAGE: Russian

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1776647	A1	19921123	SU 1990-4871555	19901008
			SU 1990-4871555	19901008

PRIORITY APPLN. INFO.:

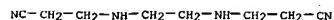
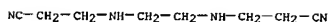
IT 3217-00-3

RL: USES (Uses)

(adhesives from tall-oil pitch and, for asphalt concrete)

RN 3217-00-3 CAPLUS

CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



AB The effectiveness of glass grinding with abrasive boron carbide  
suspensions was enhanced and surface smoothness improved by the addition  
of

polymers resulting in a decrease of surface energy. Best results were  
attained by the introduction of PVC, PVA, polyethylene glycol, and  
bis-cyanoethylenediamine modified with maleic anhydride or  
epichlorohydrin.

ACCESSION NUMBER: 1993:544720 CAPLUS

DOCUMENT NUMBER: 119:144720

TITLE: Effectiveness of polymer additives in abrasive  
suspensions on glass polishing

AUTHOR(S): Kuryleva, E. F.; Smirnova, E. I.; Sosko, A. I.

CORPORATE SOURCE: L'vov. Politekh. Inst., Lvov, Ukraine

SOURCE: Fiziko-Khimichna Mekhanika Materialiv (1992), 28(3),  
125-7

CODEN: FKMMAJ; ISSN: 0430-6252

DOCUMENT TYPE: Journal

LANGUAGE: Russian

IT 150042-02-7 150042-03-8

RL: USES (Uses)  
(in boron carbide suspensions, glass polishing performance in relation  
to)

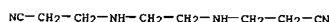
RN 150042-02-7 CAPLUS

CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis-, polymer with  
2,5-furandione (9CI) (CA INDEX NAME)

CM 1

CRN 3217-00-3

CMF C8 H14 N4



CM 2

CRN 108-31-6

CMF C4 H2 O3



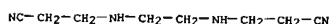
RN 150042-03-8 CAPLUS

CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis-, polymer with  
(chloromethyl)oxirane (9CI) (CA INDEX NAME)

CM 1

CRN 3217-00-3

CMF C8 H14 N4



CM 2

CRN 106-89-8  
CMF C3 H5 Cl O

AB The polymers are obtained by polycondensation of bis(active methylene compds.) with (hetero)aromatic dialdehydes and are compatible and nonmigrating in plastics formulations. Copolym. of MeN(C<sub>6</sub>H<sub>4</sub>CHO-p)<sub>2</sub> with p-C<sub>6</sub>H<sub>4</sub>(CH<sub>2</sub>CN)<sub>2</sub> gave a yellow colorant (I), λ<sub>max</sub> 437 nm in CH<sub>2</sub>Cl<sub>2</sub>. A 14-mil poly(ethylene terephthalate) film containing 200 ppm I showed an absorbance maximum at 454 nm and no loss of colorant by volatilization when

the I was present during the polymerization reaction to form the PET.

ACCESSION NUMBER: 1993:451327 CAPLUS  
DOCUMENT NUMBER: 119:51327  
TITLE: Light-absorbing polymers as colorants or UV absorbers for thermoplastics  
INVENTOR(S): Weaver, Max Allen; Krutak, James John; Coates, Clarence Alvin, Jr.; Pruett, Wayne Payton; Hilbert, Samuel David  
PATENT ASSIGNEE(S): Eastman Kodak Co., USA  
SOURCE: PCT Int. Appl., 87 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9222594	A1	19921223	WO 1992-US4941	19920605
W: CA, JP				
RM: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
CA 2106958	AA	19921211	CA 1992-2106958	19920605
EP 588962	A1	19940330	EP 1992-914311	19920605
EP 588962	B1	19980401		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
JP 06507933	T2	19940908	JP 1992-501024	19920605
AT 164603	E	19980415	AT 1992-914311	19920605
ES 2113949	T3	19980516	ES 1992-914311	19920605
US 5376650	A	19941227	US 1994-206108	19940303
US 5532332	A	19960702	US 1994-308524	19940919
PRIORITY APPLN. INFO.:			US 1991-712384	19910610
			WO 1992-US4941	19920605
			US 1993-11044	19930129
			US 1994-206108	19940303

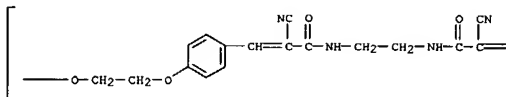
IT 148721-32-8P 148721-69-1P

RL: IMF (Industrial manufacture); PREP (Preparation)  
(preparation of, as UV absorber for plastics)

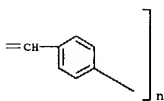
RN 148721-32-8 CAPLUS

CN Poly(oxy-1,2-ethanedioxy-1,4-phenylene(2-cyano-3-oxo-1-propene-1,3-diyl)imino-1,2-ethanedioylimino(2-cyano-1-oxo-2-propene-1,3-diyl)-1,4-phenylene) (9CI) (CA INDEX NAME)

PAGE 1-A



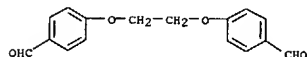
PAGE 1-B



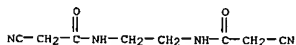
RN 148721-69-1 CAPLUS

CN Acetamide, N,N'-1,2-ethanedioylbis[2-cyano-, polymer with 4,4'-(1,2-ethanedioylbis(oxy))bis(benzaldehyde) (9CI) (CA INDEX NAME)

CM 1

CRN 34074-28-7  
CMF C16 H14 O4

CM 2

CRN 3216-88-4  
CMF C8 H10 N4 O2

AB The title reaction was a 2nd-order process, and the rate constant decreased

in the following order of solvent: pyridine > H<sub>2</sub>O > EtOH > MeOH > DMF > MeCN > EtOAc > THF > benzene. The product was NCCH<sub>2</sub>CH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>CN.

ACCESSION NUMBER: 1993:123857 CAPLUS

DOCUMENT NUMBER: 118:123857

TITLE: Reaction of ethylenediamine with propenenitrile  
Kendz, M. Sh.; Matolich, R. M.; Tanchuk, Yu. V.;

AUTHOR(S): Kremer, M. S.; Boiko, V. V.

CORPORATE SOURCE: Inst. Bioorg. Khim. Neftekhim., Kiev, Ukraine

SOURCE: Neftepererabotka i Neftekhimiya (Kiev) (1992), 42, 59-62

CODEN: NEFNB; ISSN: 0548-1406

DOCUMENT TYPE: Journal

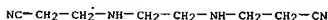
LANGUAGE: Russian

IT 3217-00-3P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 3217-00-3 CAPLUS

CN Propanenitrile, 3,3'-(1,2-ethanedioyldiimino)bis- (9CI) (CA INDEX NAME)



L18 ANSWER 37 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
AB A process for the cyanobutylation of alkylamines with 2-pentenitrile  
comprises the heating of a mixture containing an alkylamine,  
2-pentenitrile  
and 15-60% by weight H<sub>2</sub>O to 20-200° at 1-10 atmospheric The molar ratio  
of

2-pentenitrile to alkylamine is 0.3-3. A mixture of ethylenediamine  
(78

g), H<sub>2</sub>O (117 g), and cis-2-pentenitrile (120 g) was heated to 75°  
for 20 min. The product mixture thus obtained contained  
3-[(2-aminoethyl)amino]pentanenitrile (I) (56.2% yield) and  
N,N'-bis[(2-cyanoethyl)]-1,2-diethylethylenediamine (II) (39.8% yield).  
The same reaction with anhydrous ethylenediamine gave I (19.5% yield),  
no II,

and 3-pentenitrile (34.3% yield). Amination of cis-2-pentenitrile  
with MeNH<sub>2</sub> gave 98t 3-(methylamino)pentanenitrile.

ACCESSION NUMBER: 1991:679455 CAPLUS

DOCUMENT NUMBER: 115:279455

TITLE: Cyanobutylation of amines with 2-pentenitrile

INVENTOR(S): Herkes, Frank E.

PATENT ASSIGNEE(S): du Pont de Nemours, E. I., and Co., USA

SOURCE: Eur. Pat. Appl., 6 pp.

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 449297	A2	19911002	EP 1991-105020	19910328
EP 449297	A3	19930224		
EP 449297	B1	19950426		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL				
US 5070202	A	19911203	US 1990-500572	19900328
JP 04221325	A2	19920811	JP 1991-82889	19910325
JP 2858486	B2	19990217		
CA 2039264	AA	19910929	CA 1991-2039264	19910327
AT 121728	E	19950515	AT 1991-105020	19910328
			US 1990-500572	19900328

PRIORITY APPLN. INFO.:

OTHER SOURCE(S): CASREACT 115:279455; MARPAT 115:279455

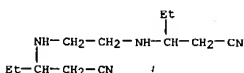
IT 137621-37-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, by cyanobutylation of ethylenediamine with  
pentanenitrile

in presence of water)

RN 137621-37-5 CAPLUS

CN Pentanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



L18 ANSWER 38 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)  
PRIORITY APPLN. INFO.: FR 1989-14719 19891109  
US 1990-610919 19901109

OTHER SOURCE(S): MARPAT 115:136130

IT 3217-00-3P

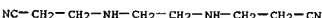
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)

(preparation and Raney reduction of, in preparation of

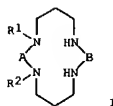
tetrazacyclotetradecane)

RN 3217-00-3 CAPLUS

CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



L18 ANSWER 38 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
GI



AB Title compds. [I; A = (substituted) C2-4 alkylene; B = CH<sub>2</sub>XCH<sub>2</sub>; X =  
(substituted) C0-2 alkylene, C6-14 arylene; R1, R2 = H, COOH,  
aminocarbonyl, alkoxycarbonyl, aryloxy, (substituted) C6-14 aryl,  
heteroaryl, alkyl, cyano, OH, NO<sub>2</sub>, halo, etc.], were prepared by 1)  
condensation of H<sub>2</sub>NANH<sub>2</sub> with H<sub>2</sub>C:CHCN to give (NCH<sub>2</sub>CH<sub>2</sub>NH)2A, 2) optional  
N-alkylation of the latter, 3) reduction of the dinitrile over a Raney

alloy

in the presence of base, 4) cyclocondensation of the resulting diamine  
with CHOBCHO in the presence of a metal ion, 5) reduction of the

resulting

bis-imine complex over a Raney alloy in the presence of NaOH or KOH, and  
6) treatment of the resulting complex with NaCN or KCN. Thus, H<sub>2</sub>C:CHCN  
was added dropwise over 2-4 h to H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub> and the mixture was stirred  
24-48 h to give 60% dinitrile, which in EtOH containing Raney alloy was  
treated with 2N NaOH to give 60% triethylenetetraamine. A mixture of the  
latter and NiCl<sub>2</sub> in H<sub>2</sub>O at 6° was treated with glyoxal and the  
mixture was stirred overnight. Raney alloy and then 2 N NaOH were added,  
the mixture was stirred and filtered, and the filtrate was refluxed 3 h  
within NaCN to give 60% 1,4,8,11-tetraazacyclotetradecane.

ACCESSION NUMBER: 1991:536130 CAPLUS

DOCUMENT NUMBER: 115:136130

TITLE: Preparation of 1,4,8,11-tetraazacyclotetradecanes and  
related macrocycles

INVENTOR(S): Guillard, Roger; Meunier, Isabelle; Jean, Christophe;

Boisselier-Coccolios, Brigitte

Air Liquide SA pour l'Etude et l'Exploitation des

Procedes Georges Claude, Fr.

SOURCE: Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 427595	A1	19910515	EP 1990-403079	19901031
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
FR 2654102	A1	19910510	FR 1989-14719	19891109
FR 2654102	B1	19920110		
CA 2029454	AA	19910510	CA 1990-2029454	19901107
ZA 9008937	A	19910925	ZA 1990-8937	19901107
JP 03169870	A2	19910723	JP 1990-301253	19901108
AU 9065927	A1	19910725	AU 1990-65927	19901108
AU 649632	B2	19940602		
US 5434262	A	19950718	US 1992-945575	19920916

L18 ANSWER 39 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
AB The title compds., e.g., H(NH(CH<sub>2</sub>)<sub>2</sub>CO<sub>2</sub>H) (I),  
H<sub>2</sub>N(CH<sub>2</sub>)<sub>3</sub>NH(CH<sub>2</sub>)<sub>2</sub>N(CH<sub>2</sub>CO<sub>2</sub>H)CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, whose metal complexes are useful  
for

fixation of oxygen and thus for anal. of oxygen, etc., are prepared via,  
e.g., addition of a polyazaalkane to acrylonitrile followed by  
hydrolysis,

N-alkylation of hexahydro-5H-1,4-diazepine-5-one with an aminoalkyl  
halide

followed by hydrolysis. Acrylonitrile was added to triethylenetetramine  
over 30 min, the formed blue solution stirred at ambient temperature for  
24 h,

excess triethylenetetramine removed by distillation under reduced  
pressure, and

the obtained nitrile hydrolyzed with H<sub>2</sub>SO<sub>4</sub> to give I.

Co(II)[PhCH<sub>2</sub>(NHCH<sub>2</sub>CH<sub>2</sub>)<sub>3</sub>CO<sub>2</sub>H] was obtained by dissolving

PhCH<sub>2</sub>(NHCH<sub>2</sub>CH<sub>2</sub>)<sub>3</sub>CO<sub>2</sub>H in water, adjusting the solution to pH

7.47

and then, at complete dissoln., to pH 2.25 followed by treatment with  
Co(OAc)<sub>2</sub>·4H<sub>2</sub>O. Fixation of oxygen by the Co(II)[C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>(NHCH<sub>2</sub>CH<sub>2</sub>)<sub>3</sub>CO<sub>2</sub>H],  
obtained similarly, by forming the μ-peroxy complex LCoO<sub>2</sub>CoL (L =  
C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>(NHCH<sub>2</sub>CH<sub>2</sub>)<sub>3</sub>CO<sub>2</sub>H) and recovering the oxygen by desorption is also  
demonstrated.

ACCESSION NUMBER: 1991:228377 CAPLUS

DOCUMENT NUMBER: 114:228377

TITLE: Preparation of polyazaalkenoic acids and analogs and  
their metal complexes for oxygen fixation

Boisselier-Coccolios, Brigitte; Guillard, Roger; Jean,

Christophe; Taurin, Laurent

Air Liquide SA pour l'Etude et l'Exploitation des

Procedes Georges Claude, Fr.

SOURCE: PCT Int. Appl., 108 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

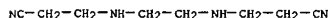
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9009987	A1	19900907	WO 1990-FR124	19900222
W: AU, CA, JP, US				
FR 2643370	A1	19900824	FR 1989-2315	19890222
FR 2643370	B1	19910823		
CA 2027578	AA	19900823	CA 1990-2027578	19900222
AU 9051759	A1	19900926	AU 1990-51759	19900222
AU 641142	B2	19930916		
EP 396435	A1	19901107	EP 1990-400488	19900222
EP 396435	B1	19950621		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
ZA 9001363	A	19910327	ZA 1990-1363	19900222
JP 03504134	T2	19910912	JP 1990-504238	19900222
US 6139603	A	20001031	US 1994-253233	19940602
			FR 1989-2315	A 19890222
PRIORITY APPLN. INFO.:				
			WO 1990-FR124	A 19900222

OTHER SOURCE(S): MARPAT 114:228377

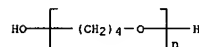
IT 3217-00-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

L18 ANSWER 39 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 (Reactant or reagent)  
 (ptepn. and alkylation of)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)

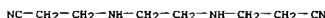


L18 ANSWER 40 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Large-angle x-ray diffraction study of short block-containing and long block-containing polyether-polyurea-polyurethanes prepared from polytetramethylene glycol, 2,4-TDI, cyanoethylated ethylenediamine, and BHO did not show differences in the ordering of samples. However, small-angle x-ray diffraction study showed that the short block-containing sample had at room temperature Bragg periodicity 7.0 nm, whereas the long block-containing sample had at the same temperature Bragg periodicity 10.0 nm. The small-angle x-ray diffraction intensity, the square of electron d. fluctuation, and the segregation degree of the components increased for both sample types with increasing temperature from 293 K to 342-363 K; these changes were reversible. A further increase of temperature to 393 K resulted in a decrease of the small-angle x-ray diffraction intensity and a decrease of the segregation degree of the components. At 453 K a new small-angle x-ray diffraction maximum was observed which was shifted to smaller angles. The morphol. changes occurring above the glass transition temperature of the samples were irreversible. These findings confirm occurrence of complex changes in microphase state in polymers with rigid blocks of different length with increasing temperature  
 ACCESSION NUMBER: 1989:535094 CAPLUS  
 DOCUMENT NUMBER: 111:135094  
 TITLE: High-temperature behavior of block polyurethane copolymers with different lengths of rigid block  
 AUTHOR(S): Vorona, V. V.; Shevchuk, A. V.; Shilov, V. V.  
 CORPORATE SOURCE: Inst. Khim. Vysokomol. Soedin., Kiev, USSR  
 SOURCE: Kompozitsionnye Polimernye Materialy (1979-19967) (1988), (39), 20-2  
 CODEN: KPMAD8; ISSN: 0203-3275  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 122738-40-3D, Bu-terminated  
 RL: PRP (Properties)  
 (morphol. of, rigid block length and temperature effect on)  
 RN 122738-40-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis-, polymer with 2,4-diisocyanato-1-methylbenzene and  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl), block (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 25190-06-1  
 CMF (C4 H8 O)n H2 O  
 CCI PMS

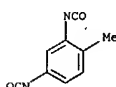


CM 2

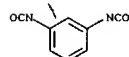
L18 ANSWER 40 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 CRN 3217-00-3  
 CMF C8 H14 N4



CM 3  
 CRN 584-84-9  
 CMF C9 H6 N2 O2

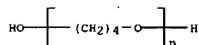


L18 ANSWER 41 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB The title oligomer was obtained from polytetramethylene glycol, TDI, and N,N'-bis(2-cyanoethyl)ethylenediamine (I), cured in air as a film, and tested for moisture absorption, vapor permeability, adhesion, tensile strength, and elongation at break. The optimal properties (low vapor permeability, high mech. strength, and short tack-free time) were shown by the oligomer containing I-based blocks with d.p. 1.5. This oligomer was used to impregnate Ftorlon fabric.  
 ACCESSION NUMBER: 1988:592027 CAPLUS  
 DOCUMENT NUMBER: 109:192027  
 TITLE: Composite material utilizing isocyanate-containing segmented oligoether urethane ureas  
 AUTHOR(S): Matyushov, V. F.; Shevchuk, A. V.  
 CORPORATE SOURCE: Inst. Khim. Vysokomol. Soedin., Kiev, USSR  
 SOURCE: Kompozitsionnye Polimernye Materialy (1979-19967) (1988), 36, 15-19  
 CODEN: KPMAD8; ISSN: 0203-3275  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 106849-28-9  
 RL: USES (Uses)  
 (rubber, coatings, for fluoropolymer fibers)  
 RN 106849-28-9 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis-, polymer with 1,3-diisocyanatomethylbenzene and  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl), block (9CI) (CA INDEX NAME)  
 CM 1  
 CRN 26471-62-5  
 CMF C9 H6 N2 O2  
 CCI IDS



D1-Me

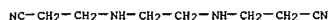
CM 2  
 CRN 25190-06-1  
 CMF (C4 H8 O)n H2 O  
 CCI PMS



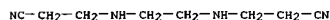


L18 ANSWER 41 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
CM 3

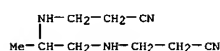
CRN 3217-00-3  
CMF C8 H14 N4



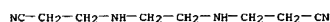
L18 ANSWER 42 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB The title wastes contain  $\text{H}_2\text{NCH}_2\text{CH}_2\text{NH}_2$  ( $\text{R} = \text{H}, \text{Me}$ ),  $\text{H}_2\text{N}(\text{CH}_2\text{CH}_2\text{NH})_n$  ( $n = 2, 3$ ),  $\text{H}_2\text{NCH}_2\text{CH}_2\text{NHCH}_2\text{CH}_2\text{NHCH}_2\text{CH}_2\text{NH}_2$  and polyethylenepolyamines, which were cyanoethylated with  $\text{CH}_2=\text{CHCN}$  in  $\text{C}_6\text{H}_6$ , PhMe, or dioxane to give 13 corresponding  $\text{Z}(\text{NR}_1\text{CH}_2\text{CH}_2\text{CN})_2$  [ $\text{I}; \text{Z} = \text{CHRCH}_2, \text{R}_1\text{N}(\text{CH}_2\text{CH}_2)_2, \text{CH}_2\text{CH}_2\text{NR}_1\text{CH}_2\text{CH}_2\text{NR}_1\text{CH}_2\text{CH}_2$ ;  $\text{R} = \text{H}, \text{Me}$ ;  $\text{R}_1 = \text{H}, \text{CH}_2\text{CH}_2\text{CN}$ ]. Acidic hydrolysis of 7 **I** gave 45-85%  $\text{Z}(\text{NR}_1\text{CH}_2\text{CH}_2\text{CO}_2\text{H})_2$  (same  $\text{Z}$ ,  $\text{R}$ ;  $\text{R}_1 = \text{H}, \text{CH}_2\text{CH}_2\text{CO}_2\text{H}$ ), isolated as the hydrochlorides.  
ACCESSION NUMBER: 1988:528377 CAPLUS  
DOCUMENT NUMBER: 109:128377  
TITLE: Cyanoethylation of wastes from the manufacture of ethylenediamine  
AUTHOR(S): Zagidullin, R. N.  
CORPORATE SOURCE: USSR  
SOURCE: Khimicheskaya Promyshlennost (Moscow, Russian Federation) (1987), (12), 714-16  
CODEN: KPRMAW; ISSN: 0023-110X  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 3217-00-3P 116546-31-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and acidic hydrolysis of)  
RN 3217-00-3 CAPLUS  
CN Propanenitrile, 3,3'-[(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



RN 116546-31-7 CAPLUS  
CN Propanenitrile, 3,3'-[(1-methyl-1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



IT 90345-76-9P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 90345-76-9 CAPLUS  
CN Propanenitrile, 3,3'-[(1,2-ethanediyldiimino)bis-, dihydrochloride (9CI) (CA INDEX NAME)

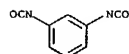


● 2 HCl

L18 ANSWER 43 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB The physicochem. and physicochem. properties of the title elastomers (**I**), prepared from polytetramethylene glycol, TDI, and cyanoethylated ethylenediamine, were measured as a function of mol. weight and the number ( $m$ ) of diamine fragments in the rigid urethane block. All **I** ( $m = 1-3$ ) were soluble in medium- and high-polarity organic solvents. Tackiness of the elastomers decreased with increasing  $m$  and mol. weight, reaching 0 for **I** with  $m = 2-3$  and mol. weight  $\geq 24,750$ . The modulus of elasticity and strength increased but relative elongation at break decreased with increasing mol. weight and  $m$  of **I**. For **I** ( $m = 2-3$ ), residual deformation ( $\epsilon_R$ ) initially decreased with increasing mol. weight, then leveled off at **I** intrinsic viscosity  $> 0.7$ . The  $\epsilon_R$  of **I** ( $m = 1$ ) decreased nearly linearly with increasing mol. weight with no apparent stabilization.  
The flow temps. were 291, 338, and 383 K, and  $T_g$  were 219, 199-227, and 188-235 K, for **I** ( $m = 1$ ), **I** ( $m = 2$ ), and **I** ( $m = 3$ ), resp. Exptl. results were discussed in terms of the effect of  $m$  on microsegregation between rigid and flexible blocks in **I**.

ACCESSION NUMBER: 1987:86004 CAPLUS  
DOCUMENT NUMBER: 106:86004  
TITLE: Segmented poly(urethane urea)s based on cyanoethylated ethylenediamine  
AUTHOR(S): Shevchuk, A. V.; Matyushov, V. F.; Lipatov, Yu. S.  
CORPORATE SOURCE: USSR  
SOURCE: Plasticheskie Massy (1986), (9), 22-5  
CODEN: PLMSAI; ISSN: 0554-2901  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 106849-28-9  
RL: USES (Uses)  
(rubber, physicochem. and physicochem. properties of, effects of mol. weight and rigid block length on)  
RN 106849-28-9 CAPLUS  
CN Propanenitrile, 3,3'-[(1,2-ethanediyldiimino)bis-, polymer with 1,3-diisocyanatomethylbenzene and  $\alpha$ -hydro- $\omega$ -hydroxypoly(oxy-1,4-butanediyl), block (9CI) (CA INDEX NAME)

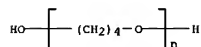
CM 1  
CRN 26471-62-5  
CMF C9 H6 N2 O2  
CCI IDS



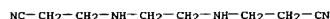
DI-Me

CM 2

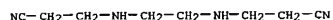
L18 ANSWER 43 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
CMF C4 H8 O)n H2 O  
CCI PMS



CM 3  
CRN 3217-00-3  
CMF C8 H14 N4



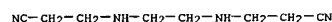
L18 ANSWER 44 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB (RCH2OCH2CH2OCH2CH2CH2)2SiR1R2 (I, R = oxiranyl; R1 = Me, R2 = Pr, Me2CH, Ph, PhCH2, PhCH2CH2, Ph(CH2)3, PhCHMeCH2, C7H15, iso-C7H15; R1 = R2 = Ph) were prepared by the hydrosilylation of RCH2OCH2CH2OCH2CH2C.tpbond.CH with H2SiR1R2 in the presence of H2PtCl6. I react with diamines to give oligomeric silyl amino alcs.  
 ACCESSION NUMBER: 1986:591182 CAPLUS  
 DOCUMENT NUMBER: 105:191182  
 TITLE: Unsaturated  $\alpha,\omega$ -diepoxyorganosilanes  
 AUTHOR(S): Sultanov, R. A.; Gazarov, T. Sh.; Tarverdiev, Sh. A.  
 CORPORATE SOURCE: Azerb. Inst. Nefti Khim., Sumgait, USSR  
 SOURCE: Doklady - Akademiya Nauk Azerbaidzhanskoi SSR (1985), 41(7), 34-6  
 CODEN: DAZRA7; ISSN: 0002-3078  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 OTHER SOURCE(S): CASREACT 105:191182  
 IT 3217-00-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with diethoxy silane derivative)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyl-diimino)bis- (9CI) (CA INDEX NAME)



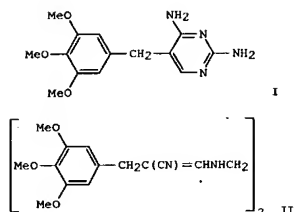
L18 ANSWER 45 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB A method is described for forming a pelletized catalyst having improved stability during a hydrogenation process such as the hydrogenation of a nitrile to an amine, which includes the steps of mixing a metal having a m.p. below .apprx.400° or a H reducible compound of the low m.p. metal with at least 1 material which is an effective hydrogenation catalyst, and then compressing the mixture to form pellets. The pellets can then be heated in H at a temperature above the m.p. of the metal. The pellets are then cooled and can then be exposed to air or other O containing gases. Thus, 75 g of a hydrogenation catalyst consisting of Co 75, Cu 22, and Cr 3 weight% was pulverized and mixed with 0.09 g Cdo. The mixture was pressed into pellets and exposed to a N-H mixture, with the proportion of H in the gas stream increased during the reduction. The maximum temperature attained during the reduction was 338°. The pellets were cooled to room temperature in N, after which air was gradually introduced. A solution of bis(cyanoethyl)ethylenediamine 1100, MeOH 1100, and NH3 1100 g was flowed at a rate of 25 mL/h through 25 cm3 of the catalyst pellets with a H flow of 12 L/h. The reactor was operated at 110-120° and 2500 psig. A high conversion to bis(aminopropyl)ethylenediamine was obtained.  
 ACCESSION NUMBER: 1986:40616 CAPLUS  
 DOCUMENT NUMBER: 104:40616  
 TITLE: Stabilized hydrogenation catalyst  
 INVENTOR(S): Larkin, John M.  
 PATENT ASSIGNEE(S): Texaco Inc., USA  
 SOURCE: U.S., 5 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4552862	A	19851112	US 1983-473168	19830307
PRIORITY APPLN. INFO.:			US 1983-473168	19830307

IT 3217-00-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (hydrogenation of, cobalt-chromium-copper-cadmium catalyst for)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyl-diimino)bis- (9CI) (CA INDEX NAME)



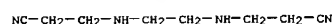
L18 ANSWER 46 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 GI



AB 2,4-Diamino-5-(3,4,5-trimethoxybenzyl)pyrimidine (I) is prepared by the reaction of  $\beta$ -ethylenediamine-N,N'-bis[( $\alpha$ -3,4,5-trimethoxybenzyl)acrylonitrile] (II) with guanidine (obtained in situ from a guanidine salt and NaOMe) in propylene glycol or Me2CHCH2OH, at 105-115°. Thus, 20 g II (preparation given) was added to 17.4 g guanidine-HCl and 12.3 g NaOMe in 60 mL propylene glycol at 60°, followed by heating at 110-115° for 6-8 h and work up, to give 19 g I.  
 ACCESSION NUMBER: 1985:45973 CAPLUS  
 DOCUMENT NUMBER: 102:45973  
 TITLE: 2,4-Diamino-5-(3,4,5 trimethoxybenzyl)pyrimidine  
 INVENTOR(S): Tokar, Geza; Krasznai, Istvan, Mrs.; Simonyi, Istvan; Ladanyi, Laszlo  
 PATENT ASSIGNEE(S): EGYT Gyogyszervegyeszet Gyar, Hung.  
 SOURCE: Hung. Teljes, 15 pp.  
 CODEN: HUXXB  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Hungarian  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
HU 32357	O	19840730	HU 1980-2032	19800815
HU 185899	B	19850428		
PRIORITY APPLN. INFO.:			HU 1980-2032	19800815

IT 3217-00-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (condensation of, with trimethoxybenzaldehyde)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyl-diimino)bis- (9CI) (CA INDEX NAME)

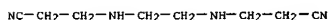


L18 ANSWER 46 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

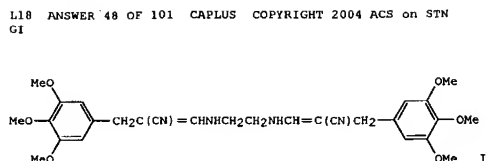
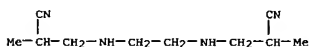
L18 ANSWER 47 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Corrosion inhibitors and antifoam agents have the general formula  
 $R_2[N(R_1)ZCN]_n$  (n = 1 or 2; Z is C1-6 alkanediyl). When n = 1, R1 and R2  
 are H or branched C1-20 alkyl, normal or branched C3-14 alkenyl, C1-20  
 hydroxyalkyl, and/or C5-6 cycloalkyl; R1R2 is (CH2)m with m = 2-10;  
 (CH2)2NH(CH2)2 or (CH2)2O(CH2)2. When n = 1, R1 is H, C1-20 alkyl, or  
 C3-14 alkenyl; and R2 is (CH2)k with k = 2-10, or (CH2)2NH(CH2)2. The  
 inhibitor is effective in the acidic or alkaline media containing H2S.  
 Thus, C  
 steel sheet specimens were exposed 6 h at 20° in aqueous 0.5% NaCl  
 acidified with AcOH to pH 3.6 and saturated to 1.5-1.7 g H2S/L. The  
 corrosion  
 inhibitor was diethylaminoacetonitrile (I) [3010-02-4]. The rate of  
 corrosion decreased from 7.22 at 0.005 to 0.04 mm/yr at 1 g I/L as  
 inhibitor.  
 ACCESSION NUMBER: 1983:616876 CAPLUS  
 DOCUMENT NUMBER: 99:216876  
 TITLE: Protecting steel and ferrous metals against hydrogen  
 sulfide corrosion  
 INVENTOR(S): Rozenfel'd, I. L.; Brusnikina, V. M.; Frolova, L. V.;  
 Lyashenko, A. A.; Sokolov, Yu. V.; Bocharov, B. V.;  
 Fokin, A. V.; Legezina, N. E.; Dergobuzova, E. V.; et  
 al.  
 PATENT ASSIGNEE(S): USSR  
 SOURCE: U.S., 8 pp. Cont. of U.S. Ser. No. 38,865, abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4404167	A	19830913	US 1981-246270	19810323
PRIORITY APPLN. INFO.:			US 1978-944150	19780920
			US 1979-38865	19790514

IT 3217-00-3  
 RL: USES (Uses)  
 (corrosion inhibitor, for steel in solns. with hydrogen sulfide)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



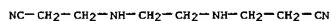
L18 ANSWER 49 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB As part of our continuing studies of the stereochem. of transition-metal  
 complexes, cobalt(III) complexes with the tetraamine ligand  
 1,10-diamino-2,9-dimethyl-4,7-diazadecane were prepared. The two asym.  
 carbon centers and two asym. nitrogen centers admit the possibility of  
 six  
 unique trans isomers. Two trans-dichloro complexes were isolated and  
 characterized by 1H and 13C NMR and by vibrational and electronic  
 spectroscopy. Strain energy minimization calcs. indicate the steric  
 requirement for axial Me substitution exceeds the induced ring strain  
 leading to a high degree of stereoselectivity. Significant distortions  
 in  
 the chelate ring conformations are reflected in increased C-C and N-C-C  
 angles of one of the six-membered chelate rings of one isomer. These  
 conformational differences are apparent in both the 13C and proton NMR  
 spectra.  
 ACCESSION NUMBER: 1983:190564 CAPLUS  
 DOCUMENT NUMBER: 98:190564  
 TITLE: Cobalt(III) complexes with the disubstituted  
 tetraamine ligand 1,10-diamino-2,9-dimethyl-4,7-  
 diazadecane  
 AUTHOR(S): Brubaker, George R.; Johnson, David W.  
 CORPORATE SOURCE: Dep. Chem., Illinois Inst. Technol., Chicago, IL,  
 60616, USA  
 SOURCE: Inorganic Chemistry (1983), 22(10), 1422-6  
 CODEN: INOCAJ; ISSN: 0020-1669  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 85135-00-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and hydrogenation of)  
 RN 85135-00-8 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis[2-methyl- (9CI) (CA  
 INDEX NAME)



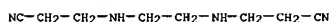
AB The title compound I was prepared by 2 methods: (1) condensation of  
 $NCCH_2CH_2NHCH_2CH_2NHCH_2CH_2CN$  (II) with 3,4,5-(MeO)3C6H2CHO (III) in an  
 inert  
 organic solvent in the presence of base and 2) treatment of a  
 3,4,5-(MeO)3C6H2CH2C(CN):CHNHR2 (HNHR2 pK > H2NCH2CH2NH2 pK) with  
 $H_2NCH_2CH_2NH_2$  in an acidic medium. Thus, 11.6 g of II in 40 mL Me2SO  
 containing 6.9 g NaOMe was condensed with 25 g III at 65° to give 5.6 g  
 I.  
 ACCESSION NUMBER: 1983:575356 CAPLUS  
 DOCUMENT NUMBER: 99:175356  
 TITLE: N,N'-Bis[2-(3,4,5-trimethoxybenzyl)-2-cyanovinyl]-1,2-  
 ethylenediamine  
 INVENTOR(S): Tokar, Geza; Krasznai, Mrs. Istvan; Simonyi, Istvan;  
 Ladanyi, Laszlo  
 PATENT ASSIGNEE(S): EGYT Gyogyszervegyeszeti Gyar, Hung.  
 SOURCE: Hung. Teljes, 12 pp.  
 CODEN: HUXKBU  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Hungarian  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
HU 24597	O	19830328	HU 1980-2031	19800815
HU 182188	B	19831228		
PRIORITY APPLN. INFO.:			HU 1980-2031	19800815

OTHER SOURCE(S): CASREACT 99:175356  
 IT 3217-00-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (condensation of, with trimethoxybenzaldehyde)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



L18 ANSWER 50 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Analogs of  $H_2N(CH_2CH_2NH)_n$  (n = 2, 3) were obtained by Michael addition  
 of  
 $CH_2CHCN$  to  $H_2NCH_2CH_2NH_2$  and subsequent hydrogenation. The Michael  
 addition  
 proceeds at 45° with no need for acid catalysis, achieving a  
 statistical distribution of products. Control of the products is  
 possible  
 only by altering the reactant molar ratios. The resultant nitriles are  
 hydrogenated by com. Co catalysts at 85° under 1500 psig H to the  
 corresponding primary amines and cyclic homopiperazine. Proper choice of  
 the catalyst virtually eliminates the unwanted cyclic by-products.  
 ACCESSION NUMBER: 1982:597791 CAPLUS  
 DOCUMENT NUMBER: 97:197791  
 TITLE: Propylenamines by cobalt-catalyzed nitrile  
 hydrogenations  
 AUTHOR(S): Duquette, L. G.; Garrou, P. E.; Hartwell, G. E.;  
 Kaufman, J. A.  
 CORPORATE SOURCE: New England Lab., Dow Chem. USA, Wayland, MA, 01778,  
 USA  
 SOURCE: Industrial & Engineering Chemistry Product Research  
 and Development (1982), 21(4), 632-5  
 CODEN: IEPRAG; ISSN: 0196-4321  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 3217-00-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation and catalytic hydrogenation of)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



L18 ANSWER 51 OF 101 CAPLUS COPYRIGHT 2004 ACS on STM  
 AB The corrosion inhibitor and antifoaming agent for steel in media containing H<sub>2</sub>S and CO<sub>2</sub> is a cyanoalkylamine containing 1-2 CN groups. The inhibitor is applicable to the protection of petroleum processing equipment from corrosion and H absorption. Thus, C steel was exposed 6 h at 20° to a 0.5% NaCl solution acidified with HOAc to pH 3.6 and saturated with H<sub>2</sub>S at 1500-1700 mg/L. When 0.05 g (diethylamino)acetonitrile [3010-02-4] inhibitor/L was present, the corrosion rate was 0.20 mm/yr. At an inhibitor concentration of 0.005 g/L, the corrosion rate was 7.22 mm/yr.

ACCESSION NUMBER: 1982:459461 CAPLUS  
 DOCUMENT NUMBER: 97:59461  
 TITLE: Antifoaming inhibitor of hydrogen sulfide corrosion  
 INVENTOR(S): Rozenfel'd, I. L.; Brusnikina, V. M.; Frolova, L. V.; Lyashenko, A. A.; Sokolov, Yu. V.; Bocharov, B. V.; Fokin, A. V.; Legezin, N. E.; Dergobuzova, E. V.; et al.

PATENT ASSIGNEE(S): Institute of Physical Chemistry, Academy of Sciences, U.S.S.R., USSR; All-Union Scientific-Research Institute of Natural Gas Can., 24 pp.  
 CODEN: CAXXA4

SOURCE: Patent  
 DOCUMENT TYPE: English  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 1114594	A1	19811222	CA 1978-311572	19780919

PRIORITY APPLN. INFO.: CA 1978-311572 19780919

IT 3217-00-3  
 RL: USES (Uses)  
 (corrosion inhibitor, for steel and hydrogen sulfide-containing media)

RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)

NC-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-CN

L18 ANSWER 53 OF 101 CAPLUS COPYRIGHT 2004 ACS on STM  
 AB In H<sub>2</sub>S-containing environment of the petroleum industry, the corrosion of C steel equipment is prevented by the use of nitrile inhibitors and antifoaming agents. Among the compds. listed are: diethylenetriamine-N,N'-dibutylonitrile [74474-84-3], diethylaminoacetonitrile [3010-02-4], diallylaminoacetonitrile [72524-91-5], and piperidinobutylonitrile [4672-18-8]. Accelerated corrosion tests were carried out on C-steel strips, in an aqueous solution of 0.5 g NaCl/L containing 1500-1700 mg H<sub>2</sub>S at 20° for 2-6 h. The inhibitors were used at 0.005-1 g/L. The corrosion rate was determined by the weight loss of the specimen and decrease in the mech. strength.

ACCESSION NUMBER: 1981:69726 CAPLUS  
 DOCUMENT NUMBER: 94:69726  
 TITLE: Antifoaming inhibitor preventing corrosion by hydrogen sulfide  
 INVENTOR(S): Rozenfel'd, I. L.; Brusnikina, V. M.; Frolova, L. V.; Lyashenko, A. A.; Sokolov, Yu. V.; Bocharov, B. V.; Fokin, A. V.; Legezin, N. E.; Al'tshuler, B. N.; et al.

PATENT ASSIGNEE(S): Institute of Physical Chemistry, Academy of Sciences, U.S.S.R., USSR; All-Union Scientific-Research Institute of Natural Gas

SOURCE: Fr. Demande, 22 pp.  
 CODEN: FRXXBL

DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2437448	A1	19800425	FR 1978-27818	19780928
FR 2437448	B1	19810417		

PRIORITY APPLN. INFO.: FR 1978-27818 19780928

IT 3217-00-3  
 RL: USES (Uses)  
 (corrosion prevention by, of steel by hydrogen sulfide in petroleum refining)

RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)

NC-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-CN

L18 ANSWER 52 OF 101 CAPLUS COPYRIGHT 2004 ACS on STM  
 AB Polyurethane, a reaction product of diisocyanate and a diol, is a useful dispersant for lubricants and fuels. Thus, a polyurethane, prepared by treating polybutenylsuccinic acid anhydride with piperazine, ethylene oxide, and tolylene 2,4-diisocyanate, used in 7.2% concentration in lubricating oil showed excellent dispersancy in the Bench VC test.

ACCESSION NUMBER: 1981:106223 CAPLUS  
 DOCUMENT NUMBER: 94:106223  
 TITLE: Polyurethanes and use thereof in lubricants and fuels  
 INVENTOR(S): Schlicht, Raymond C.  
 PATENT ASSIGNEE(S): Texaco Inc., USA  
 SOURCE: U.S., 13 pp.  
 CODEN: USXXAM

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4235730	A	19801125	US 1978-973837	19781228

PRIORITY APPLN. INFO.: US 1978-973837 19781228

IT 3217-00-3D, polymers with polyisobutenylsuccinic anhydride, ethylene oxide and 2,4-tolylene diisocyanate  
 RL: USES (Uses)  
 (polyurethane-, lubricating oil dispersants)

RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)

NC-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-CN

L18 ANSWER 54 OF 101 CAPLUS COPYRIGHT 2004 ACS on STM  
 AB The corrosion and H absorption of C steels in H<sub>2</sub>S- and CO<sub>2</sub>-containing media of the petroleum and natural gas industry is inhibited with R<sub>2</sub>(R<sub>3</sub>)NR<sub>1</sub>CN (I), where R<sub>1</sub> = C<sub>1</sub>-6 alkanediyl; R<sub>2</sub> and R<sub>3</sub> = H, C<sub>1</sub>-20 alkyl, cyanoalkylaminoalkyl, C<sub>3</sub>-4 alkenyl, C<sub>1</sub>-20 hydroxyalkyl, C<sub>1</sub>-6 cycloalkyl, or R<sub>2</sub>R<sub>3</sub> = (CH<sub>2</sub>)<sub>2</sub>-10, (CH<sub>2</sub>)<sub>2</sub>NH(CH<sub>2</sub>)<sub>2</sub>, or (CH<sub>2</sub>)<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>. The I depresses foaming, and being introduced in an amount of 51000 mg/L, serves as a corrosion inhibitor in both the gaseous and liquid phases. Thus, the corrosion rate (R) of C steel was determined at 20° in a 0.5% NaCl solution, acidified with AcOH to pH 3.6 and saturated with H<sub>2</sub>S to 1500-1700 mg/L. Diethylaminoacetonitrile (Et<sub>2</sub>NCH<sub>2</sub>CN) [3010-02-4] was used as an inhibitor and the R decreased from 7.22 to 0.04 mm/yr with increasing concentration of the inhibitor from 0.005 to 1.0 g/L.

ACCESSION NUMBER: 1980:477475 CAPLUS  
 DOCUMENT NUMBER: 93:77475  
 TITLE: Inhibitor of hydrogen sulfide corrosion  
 INVENTOR(S): Rozenfel'd, I. L.; Brusnikina, V. M.; Frolova, L. V.; Lyashchenko, A. A.; Sokolov, Yu. V.; Bocharov, B. V.; Fokin, A. V.; Legezin, N. E.; Dergobuzova, E. V.; et al.

PATENT ASSIGNEE(S): Institute of Physical Chemistry, Academy of Sciences, U.S.S.R., USSR; All-Union Scientific-Research Institute of Natural Gas

SOURCE: Ger. Offen., 26 pp.  
 CODEN: GWXXBX

DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

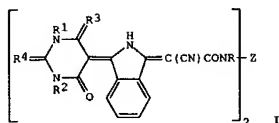
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2840976	A1	19800327	DE 1978-2840976	19780920
DE 2840976	B2	19810702		
DE 2840976	C3	19820318		
JP 59007354	B4	19840217	JP 1978-119308	19780929
JP 55047383	A2	19800403		

PRIORITY APPLN. INFO.: DE 1978-2840976 19780920

IT 3217-00-3  
 RL: USES (Uses)  
 (corrosion inhibitor, for steel in hydrogen sulfide)

RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)

NC-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-CN



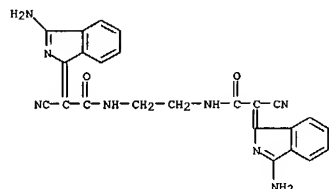
AB Isoindoline pigments (I: R = H, Cl-4; R1, R2 = H, Cl-4 alkyl, halo- or Me-substituted phenyl; R3 = O, NH; R4 = O, S, NH; Z = direct band, aliphatic, cycloaliph., aliphatic-cycloaliph., or aromatic residue) are prepared and used to color plastics or coatings fast yellow to orange shades. Thus, a mixture of 1-amino-3-iminoisoindolenine [3468-11-9] and N,N'-bis(cyanoacetyl)ethylenediamine [3216-88-4] was heated, barbituric acid [67-52-7] and HOAc were added, and yellow I (R = R1 = R2 =

H, R3 = R4 = O, Z = CH2CH2) [73280-97-4] was isolated. This pigment gave brilliant strong dyeings in lacquers without further treatment.

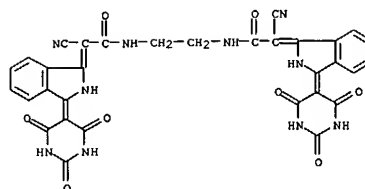
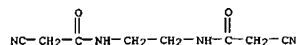
ACCESSION NUMBER: 1980:165213 CAPLUS  
DOCUMENT NUMBER: 92:165213  
TITLE: Bis(isoindoline) pigments  
INVENTOR(S): Von der Crone, Jost  
PATENT ASSIGNEE(S): Ciba-Geigy A.-G., Switz.  
SOURCE: Ger. Offen., 18 pp.  
CODEN: GWXXDX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2924142	A1	19791220	DE 1979-2924142	19790615
CH 633030	A	19821115	CH 1978-6645	19780619
US 4259488	A	19810331	US 1979-46289	19790607
GB 2024838	A	19800116	GB 1979-20996	19790615
GB 2024838	B2	19820825		
JP 55003490	A2	19800111	JP 1979-77457	19790619
PRIORITY APPLN. INFO.:			CH 1978-6645	19780619

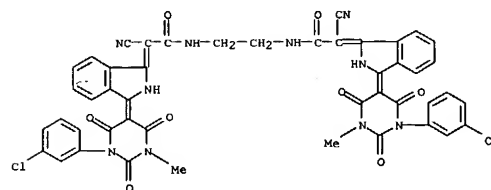
IT 73280-97-4  
RL: USES (Uses)  
(pigment, for plastics, preparation of)  
RN 73280-97-4 CAPLUS  
CN Acetamide, N,N'-1,2-ethanediybis[2-cyano-2-(2,3-dihydro-3-(tetrahydro-2,4,6-trioxo-5(2H)-pyrimidinylidene)-1H-isoindol-1-ylidene)- (9CI) (CA INDEX NAME)]



IT 3216-88-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with aminoiminoisoindolenine)  
RN 3216-88-4 CAPLUS  
CN Acetamide, N,N'-1,2-ethanediybis[2-cyano- (9CI) (CA INDEX NAME)]



IT 73280-96-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(pigment, preparation of)  
RN 73280-96-3 CAPLUS  
CN Acetamide, N,N'-1,2-ethanediybis[2-(3-[1-(3-chlorophenyl)tetrahydro-3-methyl-2,4,6-trioxo-5(2H)-pyrimidinylidene]-2,3-dihydro-1H-isoindol-1-ylidene)-2-cyano- (9CI) (CA INDEX NAME)]



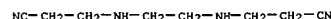
IT 73280-92-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reaction with barbituric acid)  
RN 73280-92-9 CAPLUS  
CN Acetamide, N,N'-1,2-ethanediybis[2-(3-amino-1H-isoindol-1-ylidene)-2-cyano- (9CI) (CA INDEX NAME)]

L18 ANSWER 56 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Disintegration of Co-Cu-Cr catalyst pellets used in the hydrogenation of di- and trinitriles to the amines is inhibited by the presence of polyamines or hydroxylamines. Thus, 24 mL/h of a solution containing N,N'-bis(cyanoethyl)ethylenediamine [3217-00-3] 800, ammonia 835, and ethylenediamine [107-15-3] 400 g was continuously passed over 25 mL of a pelleted oxide catalyst having metal composition Co 75, Cu 22, and Cr 3, together with 12 L/h 75:25 H-N. After 120 h operation time at 115° and 2500 psig, the cylindrical catalyst pellets appeared as they had when initially charged to the reactor, with almost no fine particles. Hydrogenating the same polynitrile in MeOH rather than ethylenediamine caused the flow through the reactor to be stopped by extensive catalyst pellet disintegration after about 28 h operating time.

ACCESSION NUMBER: 1979:404947 CAPLUS  
DOCUMENT NUMBER: 91:4947  
TITLE: Catalyst pellet stabilization in the preparation of polyamines from polynitriles  
INVENTOR(S): Larkin, John M.; Moss, Philip H.  
PATENT ASSIGNEE(S): Texaco Development Corp., USA  
SOURCE: U.S., 5 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4146560	A	19790327	US 1977-855516	19771128
GB 1579599	A	19801119	GB 1977-41739	19771007
ES 463934	A1	19780701	ES 1977-463934	19771107
FR 2378743	A1	19780825	FR 1977-34552	19771117
BR 7707891	A	19780829	BR 1977-7891	19771128
SE 7713967	A	19780729	SE 1977-13967	19771208
NL 7800165	A	19780801	NL 1978-165	19780106
JP 53095906	A2	19780822	JP 1978-6788	19780126
JP 57035899	B4	19820731		
BE 863398	A1	19780727	BE 1978-184692	19780127
CA 1105947	A1	19810728	CA 1978-295865	19780130
PRIORITY APPLN. INFO.:			US 1977-763394	19770128

IT 3217-00-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrogenation of, catalyst pellet stabilization in)  
RN 3217-00-3 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)]



Li8 ANSWER 57 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN

AB Two polyamines were prepared by hydrogenating the corresponding polynitriles over a tabletted catalyst in the presence of a disintegration-inhibiting stabilizer, an amine with 22 NH<sub>2</sub> or 21 NH<sub>2</sub> and 21 OH groups separated by 54 C atoms. Thus, (NCCH<sub>2</sub>CH<sub>2</sub>NHCH<sub>2</sub>)<sub>2</sub>, NH<sub>3</sub>, and (H<sub>2</sub>NCH<sub>2</sub>)<sub>2</sub> together with 75:25 H<sub>2</sub>-N<sub>2</sub> were passed over a Co-Cu-Cr oxide catalyst 120 h at 115°/175 bars gage to give [H<sub>2</sub>N(CH<sub>2</sub>)<sub>3</sub>NHCH<sub>2</sub>]<sub>2</sub> with no change in the catalyst. Omitting the amine stabilizer and using MeOH solvent caused plugging of the reactor after 28 h because of catalyst disintegration.

ACCESSION NUMBER: 1978:596953 CAPLUS  
DOCUMENT NUMBER: 89:196953  
TITLE: Polyamines from the corresponding polynitriles  
INVENTOR(S): Larkin, John Michael; Moss, Philip Hotchkiss  
PATENT ASSIGNEE(S): Texaco Development Corp., USA  
SOURCE: Ger. Offen., 15 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2755687	A1	19780803	DE 1977-2755687	19771214
GB 1579599	A	19801119	GB 1977-41739	19771007
ES 463934	A1	19780701	ES 1977-463934	19771107
FR 2378743	A1	19780825	FR 1977-34552	19771117
BR 7707891	A	19780829	BR 1977-7891	19771128
SE 7713967	A	19780729	SE 1977-13967	19771208
NL 7800165	A	19780801	NL 1978-165	19780106
JP 53095906	A2	19780822	JP 1978-6788	19780126
JP 57035899	B4	19820731		
BE 863398	A1	19780727	BE 1978-184692	19780127
CA 1105947	A1	19810728	CA 1978-295865	19780130

PRIORITY APPLN. INFO.:  
US 1977-763394 19770128

IT 3217-00-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrogenation of, amine-stabilized catalysts for)  
RN 3217-00-3 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediyl-diimino)bis- (9CI) (CA INDEX NAME)

NC-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-CN

Li8 ANSWER 59 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN

AB Relative volatilities and separation coeffs. were determined for 23 solvents in ternary styrene-PhEt-solvent systems.  
ACCESSION NUMBER: 1978:518501 CAPLUS  
DOCUMENT NUMBER: 89:118501  
TITLE: Study of the solvent effect on the vapor-liquid equilibrium in the styrene-ethylbenzene system  
AUTHOR(S): Aliev, A. M.; Akhmedov, S. M.; Rafi-Zade, R. D.; Musaev, V. I.  
CORPORATE SOURCE: USSR  
SOURCE: Sbornik Trudov - Akademiya Nauk Azerbaidzhanskoi SSR, Institut Neftekhimicheskikh Protessov im. Yu. G. Mamedaliev (1977), 9, 96-9  
CODEN: SNFAAQ; ISSN: 0400-9525  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 3217-00-3  
RL: PRP (Properties)  
(systems, ethylbenzene-styrene-)  
RN 3217-00-3 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediyl-diimino)bis- (9CI) (CA INDEX NAME)

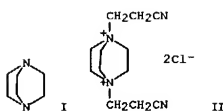
NC-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-CN

Li8 ANSWER 58 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN

AB Relative volatility changes and separation coeffs. in styrene-PhEt-organic solvent systems were determined for 23 organic solvents. Best separation occurs on adding p-cresol, PhNO<sub>2</sub>, o-dichlorobenzene, di-Me phthalate, 2-(diethylamino)ethanol, or ethylenediaminedipropionitrile.  
ACCESSION NUMBER: 1978:518519 CAPLUS  
DOCUMENT NUMBER: 89:118519  
TITLE: Study of the effect of solvents on liquid-vapor equilibrium in the styrene-ethylbenzene system  
AUTHOR(S): Aliev, A. M.; Akhmedov, S. M.; Rafi-Zade, R. D.; Musaev, V. I.  
CORPORATE SOURCE: USSR  
SOURCE: Vopr. Neftekhim. (1977), 9, 96-9  
CODEN: VENTAI; ISSN: 0372-6606  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 3217-00-3  
RL: PRP (Properties)  
(systems, ethylbenzene-styrene-)  
RN 3217-00-3 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediyl-diimino)bis- (9CI) (CA INDEX NAME)

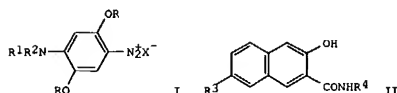
NC-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-CN

Li8 ANSWER 60 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN



AB The title compound I, obtained in 94% yield as its dihydrochloride, was prepared in 4 steps by treatment of NCCH<sub>2</sub>CH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>CN with ethylene oxide to give the diol, chlorination to give 68% dichloro derivative, cyclization to give II and decyanoethylation by boiling in DMF.  
ACCESSION NUMBER: 1978:443332 CAPLUS  
DOCUMENT NUMBER: 89:43332  
TITLE: Synthesis of 1,4-diazabicyclo[2.2.2]octane  
AUTHOR(S): Shishkin, G. V.; Anisimova, I. L.  
CORPORATE SOURCE: Novosib. Inst. Org. Khim., Novosibirsk, USSR  
SOURCE: Khimiya Geterotsiklicheskh Soedinenii (1978), (4), 548-50  
CODEN: KGSSAQ; ISSN: 0453-8234  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
OTHER SOURCE(S): CASREACT 89:43332  
IT 3217-00-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with ethylene oxide)  
RN 3217-00-3 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediyl-diimino)bis- (9CI) (CA INDEX NAME)

NC-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-CN



AB Black-image-forming 2-component type diazo copying papers contain a diazo compound of the formula I (R = Cl-4 alkyl; R1, R2 = alkyl, aralkyl, cycloalkyl with/without substituents, or R1R2 in combination may form a heterocycle with the N atom; X = anion), a blue coupler of the general formula II (R3 = H, Cl-14 alkoxy, halogen; R4 = H, (CH2)nOH (n = 2-4), (CH2)mNR5R6 (m = 2-4; R5, R6 = Cl-14 alkyl, or R5R6 in combination may form a heterocycle with the N atom)), a yellow coupler

NCCH2CONHCH2CH2NHCOCH2CN (III), and a red coupler 2-methylresorcinol (IV). The above combination of couplers and the diazo compound yields diazo copying paper having good coupling rate balance, low stain or fog, and a long shelf life. Thus, a paper support was coated with a composition consisting of H2O 100 mL, benzenedisulfonic acid 1, caffeine 2, Na naphthalene-1,3,6-trisulfonate

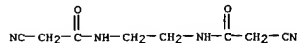
1, II (R3 = H, R4 = 2-morpholinoethyl) 0.3, III 0.4, IV 0.05, 4-morpholino-2,5-dibutoxybenzenediazonium chloride-zinc chloride salt 2.0, and saponin 0.1 g to give a black-image-forming diazo copying paper. The paper was imagewise exposed and developed with a solution containing K2CO3 20 and K metasilicate 30g/L to give a copy with black images having a Dmax and Dmin of 1.33 and 0.09, resp. When the paper was aged at 50° and 50% relative humidity for 48 h, the Dmax and Dmin were 1.26 and 0.12, resp.

ACCESSION NUMBER: 1978:201037 CAPLUS  
DOCUMENT NUMBER: 88:201037  
TITLE: Two component diazo copying papers for black images  
INVENTOR(S): Matsuda, Teutomu  
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokyo Koho, 5 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 52132824	A2	19771107	JP 1976-49529	19760430

PRIORITY APPLN. INFO.: JP 1976-49529 19760430

IT 3216-88-4  
RL: USES (Uses)  
(yellow coupler, for black-image forming diazo copying paper)  
RN 3216-88-4 CAPLUS



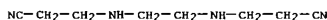
L18 ANSWER 63 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
AB Heating a mixture of 40 moles H2NCH2CH2NH2 with 80.5 moles CH2:CHCN and 24 g HOAc for 2 hr at 50-5° gave NCCH2CH2NHCH2CH2NHCH2CH2CN in 98% yield. Lower yields were obtained without the use of HOAc.

ACCESSION NUMBER: 1976:446011 CAPLUS  
DOCUMENT NUMBER: 85:46011  
TITLE: Bis(2-cyanoethyl)ethylenediamine  
INVENTOR(S): Graefje, Heinz; Hoffmann, Herwig; Hupfer, Leopold; Lebkuecher, Rolf; Merkel, Karl  
PATENT ASSIGNEE(S): BASF A.-G., Fed. Rep. Ger.  
SOURCE: Ger. Offen., 5 pp. Addn. to Ger. Offen. 2,140,151.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2446489	A1	19760415	DE 1974-2446489	19740528
BE 833035	A4	19760303	BE 1975-159716	19750903
NL 7511258	A	19760330	NL 1975-11258	19750924

PRIORITY APPLN. INFO.: DE 1974-2446489 19740528

IT 3217-00-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 3217-00-3 CAPLUS  
CN Propanenitrile, 3,3'-[(1-methyl-1,2-ethanediyl)diimino]bis-, (R)- (9CI) (CA INDEX NAME)



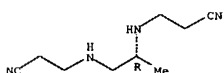
L18 ANSWER 62 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
AB The best selectivity of ligand-exchange chromatog. of enantiomeric amino acids was achieved with asym. sorbents in Ni2+ form for histidine and phenylalanine, and in Cu2+ form for phenylalanine and proline. The height of equivalent theor. plates were 10-50 mm. The sorbent was prepared by treating

macroreticular chloromethylated polystyrene with R-4-methyl-1,8-cyano-3,6-diazaoctane and by hydrolyzing the product with 6 N HCl.

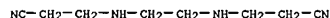
ACCESSION NUMBER: 1978:158965 CAPLUS  
DOCUMENT NUMBER: 88:158965  
TITLE: Ligand-exchange chromatography of amino acid enantiomers on polystyrene asymmetric sorbent with R-1,2-bis(2'-carboxyethylamino)propane groupings  
AUTHOR(S): Yamskov, I. A.; Berezin, B. B.; Tikhonov, V. E.; Davankov, V. A.  
CORPORATE SOURCE: Inst. Org.-Elem. Compd., Moscow, USSR  
SOURCE: Bioorganicheskaya Khimiya (1978), 4(2), 149-53  
CODEN: BIKHD7; ISSN: 0132-3423  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian

IT 66267-81-0D, reaction products with chloromethylated polystyrene, hydrolyzed, metal complexes  
RL: FRP (Properties)  
(ligand-exchange chromatog. on, of amino acid enantiomers)  
RN 66267-81-0 CAPLUS  
CN Propanenitrile, 3,3'-[(1-methyl-1,2-ethanediyl)diimino]bis-, (R)- (9CI) (CA INDEX NAME)

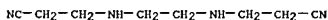
Absolute stereochemistry.



L18 ANSWER 64 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB Eleven substituted 1,4,8,11-tetraazacyclotetradecanenickel(II) complexes were prepared by the Ni ion assisted cyclization of 1,5,8,12-tetraazadodecanes with glyoxal and reduction of the unsatd. complex obtained in the cyclization reaction. NaBH<sub>4</sub> or H and Raney nickel catalyst were used for the reduction With 2 exceptions, yields of the saturated complexes were 50-75%. Macrocyclic tetramines were obtained by decomposition of the Ni complexes with cyanide ion. 1,5,9,15-Tetraazacyclopentadecane was prepared in 45% yield from 1,5,9,13-tetraazatridecane by this method.  
 ACCESSION NUMBER: 1976:413135 CAPLUS  
 DOCUMENT NUMBER: 85:13135  
 TITLE: Synthesis of macrocyclic tetramines by metal ion assisted cyclization reactions  
 AUTHOR(S): Barefield, E. Kent; Wagner, F.; Hodges, Keith D.  
 CORPORATE SOURCE: Univ. Illinois, Urbana, IL, USA  
 SOURCE: Inorganic Chemistry (1976), 15(6), 1370-7  
 CODEN: INOCJ; ISSN: 0020-1669  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 3217-00-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with benzyl bromide and Raney nickel)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



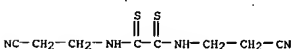
L18 ANSWER 65 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB The activity coeffs. of sulfur compds. such as cyclo- and dialkyl sulfides (I), mercaptans (II), and alkylthiophenes (III) in 10 extractants were determined by gas-liquid chromatog. The relative separation selectivities of the S compds. and hydrocarbons were calculated The separation selectivities decreased in the following order: III > alkylbenzenes (IV) ~ I > normal-paraffins > II. The activity coeffs. of cyclic S compds. such as thiophane (V) and III varied with temperature increase in a manner similar to that shown by the corresponding IV in the same extractants. Thus, the activity coeffs. of IV, V, and III increased in sulfolane [126-33-0] and tricresyl phosphate [1330-78-5] with increasing temperature  
 ACCESSION NUMBER: 1976:46937 CAPLUS  
 DOCUMENT NUMBER: 84:46937  
 TITLE: Activity coefficients of sulfurous compounds in different extractants  
 AUTHOR(S): Pais, M. A.; Bondarenko, M. F.; Abramovich, Z. I.; Kruglov, E. A.  
 CORPORATE SOURCE: USSR  
 SOURCE: Neftekhimiya (1975), 15(4), 626-9  
 CODEN: NEFTAJ; ISSN: 0028-2421  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 3217-00-3  
 RL: USES (Uses)  
 (in extraction, of organic sulfur compds.)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



L18 ANSWER 66 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB Crosslinked vinylarom. polymers containing halomethyl groups were treated with polyalkylenepolyamine derivs. containing ≥1 of succinonitrile, dialkyl succinate, glutaronitrile, or dialkyl glutarate residues and containing ≥1 primary and/or secondary amino group and then hydrolyzed. Thus, 50 g chloromethylated (0.3 mole CH<sub>2</sub>Cl group content) polystyrene [5003-53-6] granules (0.225-0.5 mm average diameter) were stirred 1 hr at 100° in 700 ml dioxane and refluxed 15 hr with 216 g N,N'-bis(1,2-dicyanoethyl)ethylenediamine [57169-77-4] and the product stirred 5 hr with 500 ml concentrated HCl, filtered, and dipped in NaOH to give a chelating resin with 1.18 and 1.41 mmole/g selective Cu [7440-50-8] adsorption capacity during 1 and 2 hr, resp.  
 ACCESSION NUMBER: 1975:607008 CAPLUS  
 DOCUMENT NUMBER: 83:207008  
 TITLE: Chelate resins  
 INVENTOR(S): Aya, Toshihiko; Chiba, Kazumasa; Izumi, Zenji  
 PATENT ASSIGNEE(S): Toray Industries, Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 50095389	A2	19750729	JP 1973-143707	19731225
PRIORITY APPLN. INFO.:			JP 1973-143707	19731225

L18 ANSWER 67 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
 GI For diagram(s), see printed CA Issue.  
 AB ROC(S)C(S)OR (I, R = Me, Et) reacted with primary amines to give R1R2NC(S)C(S)NR1R2 (II, R1 and R2 = H, alkyl, aryl). In dilute alc. solution ROC(:NR1)C(S)OR and ROC(:NR1)C(:NR1)OR were obtained. Reaction of I with secondary amines gave ROC(S)C(S)NR1R2 (III) intermediate to II. III was substituted by primary amines to give R3NHC(S)C(S)NR1R2. On heating in base III rearranged to RSC(O)C(S)NR1R2, which reacted with primary amines to give R3NHC(O)C(S)NR1R2. Reaction of I with o-H2NC6H4XH (X = O, S) gave bibenzazolyis IV (R4 = H, Cl). With o-(H2N)2C6H4 quinoxalines V were obtained.  
 ACCESSION NUMBER: 1975:578997 CAPLUS  
 DOCUMENT NUMBER: 83:178997  
 TITLE: Thiono and dithio esters. 17. Reaction of dithionoxalic esters with amines  
 AUTHOR(S): Hoppe, H.; Hartke, Klaus  
 CORPORATE SOURCE: Inst. Pharm. Chem. Lebensmittelchem., Univ. Marburg, Marburg, Fed. Rep. Ger.  
 SOURCE: Archiv der Pharmazie (Weinheim, Germany) (1975), 308(7), 526-41  
 CODEN: ARPHAS; ISSN: 0365-6233  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 OTHER SOURCE(S): CASREACT 83:178997  
 IT 57050-30-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 57050-30-3 CAPLUS  
 CN Ethanedithioamide, N,N'-bis(2-cyanoethyl)- (9CI) (CA INDEX NAME)

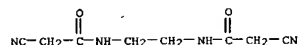




L18 ANSWER 68 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 GI For diagram(s), see printed CA Issue.  
 AB Benzoxazolylacetamides (I, Rn = e.g. H, 5-Cl, 5-Me2NSO2, 5-cyclohexyl, 5-Ph, 5,6-Me2, 4,5-benzo, or 4,5-(o-C6H4O); R1 = H, Me, or Ph; R2 = e.g. H, Cl-18 alkyl, cyclohexyl, (CH2)3OMe, 3-morpholinopropyl, 4-pyridylmethyl, or 1-naphthyl; or NR1R2 = 1-pyrrolidinyl, piperidino, 1-azacycloheptyl, 4-methyl-1-piperazinyl, or 2-methyl-1-indolyl) were prepared and used as intermediates for the preparation of benzoxazolylcoumarins II (R3 = Et2N or Me2N; R4 = H or Me). Thus, 2-H2NCGH4OH and NCCH2CONH2 were heated at ≤170° to give 2-(2-benzoxazolyl)acetamide (III) [34564-12-0]. Similarly prepared were 40 other I. NCCH2CO2Et reacted successively with H2N(CH2)3OMe and 4,2-Me(H2N)C6H3OH (IV) to give N-(3-methoxypropyl)-2-(5-methyl-2-benzoxazolyl)acetamide (V) [35783-38-1]. Similarly prepared were 40 other I. III and cyclohexylamine were refluxed in Me(CH2)4OH to give N-cyclohexyl-2-(2-benzoxazolyl)acetamide [35783-31-4]. Similarly prepared were 40 other I. NCCH2CO2Et and IV were heated at ≤170° to give N-(2-hydroxy-5-methylphenyl)-2-(5-methyl-2-benzoxazolyl)acetamide [35773-36-5]. Similarly prepared were 4 other I. Refluxing V and 2,4-HO(Et2N)C6H3CHO in Me2CHOH in the presence of piperidine gave the coumarin derivative (II, R3 = Et3N, R4 = Me). Similarly prepared were 2 other II.  
 ACCESSION NUMBER: 1975-87700 CAPLUS  
 DOCUMENT NUMBER: 82-87700  
 TITLE: 2-(2-Benzoxazolyl)acetamides and 3-(2-benzoxazolyl)coumarins  
 INVENTOR(S): Harnisch, Horst  
 PATENT ASSIGNEE(S): Bayer A.-G.  
 SOURCE: Ger. Offen., 32 pp. Addn. to Ger. Offen. 2,030,507. (CA 76:128826k).  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2065552	A1	19740307	DE 1970-2065552	19700620
PRIORITY APPLN. INFO.:			DE 1970-2065552	19700620

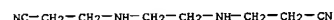
IT 3216-00-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with aminophenol derivative, closure in)  
 RN 3216-88-4 CAPLUS  
 CN Acetamide, N,N'-1,2-ethanedilybis(2-cyano- (9CI) (CA INDEX NAME)



L18 ANSWER 70 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Aromatic hydrocarbons, e.g., C6H6, were separated from mixts. containing alkanes and cycloalkanes, as well as other aromatic hydrocarbons, by extraction with a nitrile, e.g., (NCCH2CH2)2NH.  
 ACCESSION NUMBER: 1974:425311 CAPLUS  
 DOCUMENT NUMBER: 81:25311  
 TITLE: Obtaining aromatic hydrocarbons  
 INVENTOR(S): Buchwald, Karl H.; Deutsch, Klaus; Franke, Hermann; Langer, Uwe; Welsch, Reinhardt  
 SOURCE: Ger. (East), 10 pp.  
 CODEN: GEXXA8  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 103231	Z	19740112	DD 1973-170543	19730427
PRIORITY APPLN. INFO.:			DD 1973-170543	19730427

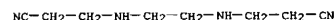
IT 3217-00-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (extraction by aromatic hydrocarbons)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanedilyddiimino)bis- (9CI) (CA INDEX NAME)



L18 ANSWER 69 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Twenty-four HCONHCH(CCl3)NR2NR1CH(CCl3)NHCOH [I; Z = CH2, CH2CH2, (CH2)3, or CHMeCH2; R,R1 = e.g. H, Me, octyl, allyl, NCCH2CH2, Ph, 4-ClC6H4, PhCH2, or 2- or 4-ClC6H4-CH2], useful as fungicides, were prepared in most part by reaction of HCONHCH(CCl3) (II) with RNH2NR1 in the presence of Et3N. Thus, II reacted with H2NCH2CH2NH2 (III) in THF in the presence of Et3N at room temperature to give 88% I (Z = CH2CH2, R = R1 = H), which was also prepared in 47% yield by reaction of III with N-[1-(cyclohexylsulfonyl)-2,2,2-trichloroethyl]formamide in the presence of Et3N. II was treated with NH3 in THF to give 95% HCONHCH(NH2)CCl3, which reacted with 35% HCHO to give 69% I (Z = CH2, R = R1 = H).  
 ACCESSION NUMBER: 1974:551567 CAPLUS  
 DOCUMENT NUMBER: 81:151567  
 TITLE: N,N'-Bis(2,2,2-trichloro-1-formamidoethyl)alkylenediamines  
 INVENTOR(S): Ost, Walter; Thomas, Klaus; Jerchel, Dietrich; Appel, Karl R.  
 PATENT ASSIGNEE(S): Boehringer, C. H., Sohn  
 SOURCE: Ger. Offen., 16 pp. Div. of Ger. Offen. 1,901,421 (CA 72:30535).  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

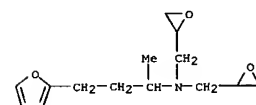
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 1966863	A	19740822	DE 1969-1966863	19690113
DE 1966863	B2	19770505		
DE 1966863	C3	19771222		
AT 280976	B	19700511	AT 1968-4795	19680517
US 3716587	A	19730213	US 1971-128168	19710325
US 3752842	A	19730814	US 1971-128169	19710325
US 3717709	A	19730220	US 1971-159030	19710701
US 3786146	A	19740115	US 1972-271365	19720713
PRIORITY APPLN. INFO.:			AT 1968-4795	19680517
			AT 1968-674	19680123
			US 1969-793187	19690122
			US 1970-87015	19701104

IT 3217-00-3  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction of, with (tetrachloroethyl)formamides)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanedilyddiimino)bis- (9CI) (CA INDEX NAME)

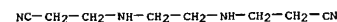


L18 ANSWER 71 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 GI For diagram(s), see printed CA Issue.  
 AB The reaction of epichlorohydrin with α-furylpropylamine gave the following N,N-di(2,3-epoxypropyl)-1-(or 2-)alkyl-3-(α-furyl)propylamines (I) (R, R1, yield (%), given): Me, H, 70; iso-Pr, H (II), 70; H, Me (III), 62.5; and H, Et, 66. II and Et2NH at 45-50° gave 70% IV, but III with N,N'-di(β-cyanethyl)ethylenediamine gave a polymer of mol. weight 1256.  
 ACCESSION NUMBER: 1972:501309 CAPLUS  
 DOCUMENT NUMBER: 77:101309  
 TITLE: Diepoxide compounds of the furan series  
 AUTHOR(S): Sadykh-Zade, S. I.; Sultanov, R. A.; Mamedova, L. G.  
 CORPORATE SOURCE: Inst. Neftekhim. Protess., Sumgait, USSR  
 SOURCE: Khimiya Geterotsiklicheskikh Soedinenii, Sbornik (1970), No. 2 (Kislorodsoderzhashchie Geterotsikly), 11-12.  
 CODEN: KHGSA7; ISSN: 0454-8825  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 36682-55-0P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 36682-55-0 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanedilyddiimino)bis-, polymer with α-methyl-N,N-bis(oxiranylmethyl)-2-furanpropanamine (9CI) (CA INDEX NAME)

CM 1  
 CRN 36783-52-5  
 CMF C14 H21 N O3



CM 2  
 CRN 3217-00-3  
 CMF C8 H14 N4

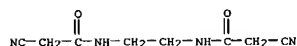


L18 ANSWER 72 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Heat stabilizers for poly(oxyethylene)s have the formula R(NHCOCH<sub>2</sub>X)<sub>n</sub>, where R is C<sub>2</sub>-20 hydrocarbon radical or C<sub>2</sub>-40 hydrocarbon radical containing O or S in the center, X = cyano or carbamoyl, and n is 2-6; the stabilizers were used in conjunction with 2,2'-methylenebis(4-methyl-6-tert-butylphenol) (I) [119-47-1]. For example, poly(oxyethylene) diacetate [25231-38-3] stabilized with 1,2-bis(cyanacetamido)ethane (II) [3216-88-4] and heated to 222 deg. decomposed at 0.048%/min. With a I-II stabilizer system the decomposition rate was 0.018%/min. Twenty-one other compds. used in place of II gave similar results. II was prepared by treatment of 226 parts Et cyanoacetate with 26 parts ethylenediamine.

ACCESSION NUMBER: 1972:128164 CAPLUS  
 DOCUMENT NUMBER: 76:128164  
 TITLE: Stabilizers for poly(oxyethylene)  
 INVENTOR(S): Ishii, Takami; Yoshikawa, Toshio; Inaike, Toshihiro; Kuroda, Kazuhiro; Kido, Kunio; Tokunaga, Kiyoeaki  
 PATENT ASSIGNEE(S): Ube Industries Ltd.  
 SOURCE: Ger. Offen., 32 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2126760	B2	19750515	DE 1971-2126760	19710528
DE 2126760	C3	19760108		
JP 48011218	B4	19730411	JP 1970-46926	19700602
JP 48011219	B4	19730411	JP 1970-85895	19701002
US 3787353	A	19740122	US 1971-148978	19710601
NL 7107576	A	19711206	NL 1971-7576	19710602
NL 157933	B	19780915		
FR 2093983	A1	19720204	FR 1971-19902	19710602
FR 2093983	A5	19720204		
GB 1326449	A	19730815	GB 1971-18629	19710602
CH 549618	A	19740531	CH 1971-7993	19710602
PRIORITY APPLN. INFO.:			JP 1970-46926	19700602
			JP 1970-85895	19701002

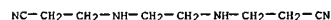
IT 3216-88-4 36394-59-9  
 RL: PEP (Physical, engineering or chemical process); PROC (Process) (heat stabilizers, for polyoxymethylenes)  
 RN 3216-88-4 CAPLUS  
 CN Acetamide, N,N'-1,2-ethanedilylbis(2-cyano- (9CI) (CA INDEX NAME)



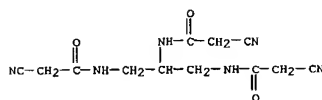
RN 36394-59-9 CAPLUS  
 CN Acetamide, N,N',N''-1,2,3-propanetriyltris(2-cyano- (9CI) (CA INDEX NAME)

L18 ANSWER 73 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB In the presence of bovine plasma amine oxidase (I), the naturally occurring polyamines, spermine (II) [71-44-3] and spermidine (III) [124-20-9] were converted into compds. having a cytotoxic activity against KB cells (human epidermoid carcinoma). Some polyamines with a 2-aminoethylamino terminal group were prepared by direct mono- and diaminomethylation of α,ω-alkylenediamines. The substrate requirements for the conversion into cytotoxic compds. by I were the presence of the terminal group and binding capability to a hydrophobic region adjacent to the active site of I.

ACCESSION NUMBER: 1972:41828 CAPLUS  
 DOCUMENT NUMBER: 76:41828  
 TITLE: Synthesis of aminoethyl derivatives of α,ω-alkylenediamines and structure-activity relations for the polyamine-bovine plasma amine oxidase system  
 AUTHOR(S): Israel, Merwyn; Modest, Edward J.  
 CORPORATE SOURCE: Child. Cancer Res. Found., Harvard Med. Sch., Boston, MA, USA  
 SOURCE: Journal of Medicinal Chemistry (1971), 14(11), 1042-7  
 CODEN: JMCMAJ; ISSN: 0022-2623  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 3217-00-3  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (Neoplasm inhibitor, metabolism by amine oxidase in relation to)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanedilyldiimino)bis- (9CI) (CA INDEX NAME)



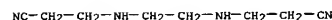
L18 ANSWER 72 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



L18 ANSWER 74 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Prepolymers prepared from polyols (mol. weight >400) and excess diisocyanates were chain extended by 1,2-bis(2-cyanoethylamino)ethane (I) [3217-00-3] to give the title dispersions, useful as binders for non-woven fabrics, adhesives for construction materials, and surface-finishing agents for plastics, leathers, textiles, etc. Thus, 100 parts dehydrated poly(oxypropylene) glycol (25322-69-4) (OH value 158.7 and average mol. weight 700) and 49.7 parts tolylene diisocyanate were heated 3 hr at 80 deg.. A PhMe-MeCN solution of the resulting prepolymer (625.5 NCO equivalent) (100 parts) was mixed 35 min at 35 deg. with 13.95 parts of 95.2% I, and resultant transparent solution (98.5 P viscosity) was stirred 7 min with an aqueous solution containing propylene glycol-ethylene glycol copolymer (as emulsifier) to give a dispersion (125 P viscosity, pH 6.4, 35% solid content, and .sim.1 μ particle size) which was poured onto a polypropylene sheet and heated 10 min at 80 deg. to give a film with 216 kg/cm<sup>2</sup> tensile strength and 1200% elongation.

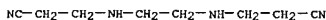
ACCESSION NUMBER: 1972:15573 CAPLUS  
 DOCUMENT NUMBER: 76:15573  
 TITLE: Aqueous dispersions of polyurethane  
 INVENTOR(S): Onodera, Norio  
 PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc.; Dainippon Ink Research Institute  
 SOURCE: Jpn. Tokkyo Koho, 5 pp.  
 CODEN: JAXXAD  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 46022944	B4	19710630	JP	19671118
IT 3217-00-3				
RL: USES (Uses)				
(chain extenders, for urethane rubber)				
RN 3217-00-3 CAPLUS				
CN Propanenitrile, 3,3'-(1,2-ethanedilyldiimino)bis- (9CI) (CA INDEX NAME)				



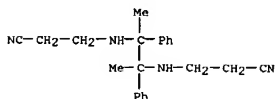
L18 ANSWER 75 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Treating 150 ml CH<sub>2</sub>CHCN over 1 hr, with 60 ml 98 (CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub> gave, after 1 hr at room temperature and 1 hr at 100°, 37.5 NC(CH<sub>2</sub>)<sub>2</sub>NH(CH<sub>2</sub>)<sub>2</sub>NH(CH<sub>2</sub>)<sub>2</sub>CN, which added slowly to conductivity H<sub>2</sub>SO<sub>4</sub> at 0-80°, then kept 10-15 min at 70-5° gave, on dilution and keeping the mixture 5 days, 35 HO<sub>2</sub>C(CH<sub>2</sub>)<sub>2</sub>NH(CH<sub>2</sub>)<sub>2</sub>NH(CH<sub>2</sub>)<sub>2</sub>CO<sub>2</sub>H.H<sub>2</sub>SO<sub>4</sub>. This, in aqueous solution at pH 8-9 in 5-6 hr, gave, on acidification to pH 2-3 and passage through KU1 cationite resin, 49-50 (CH<sub>2</sub>NH<sub>2</sub>[(CH<sub>2</sub>)<sub>2</sub>SO<sub>3</sub>-(CH<sub>2</sub>)<sub>2</sub>CO<sub>2</sub>H]<sub>2</sub> (I), with pK<sub>1</sub> 2.45, pK<sub>2</sub> 3.85, pK<sub>3</sub> 5.8, and pK<sub>4</sub> 9.0. The stability constants of its complexes with Cu, Zn, Cd and Hg ions were tabulated and compared with those of similar polybasic acids. I forms less stable complexes with Cu and Hg than do acids with acetic rather than propionic acid residues.

ACCESSION NUMBER: 1972:3255 CAPLUS  
 DOCUMENT NUMBER: 76:3255  
 TITLE: Synthesis of complexing compounds. Ethylenediamine-N,N'-diethane-β-sulfo-N,N'-dipropionic acid and its properties Egorova, L. G.; Serebryakova, N. V.; Tyurenkova, G. N.  
 CORPORATE SOURCE: Ural. Politekh. Int. im. Kirova, Sverdlovsk, USSR  
 SOURCE: Zhurnal Obshchei Khimii (1971), 41(8), 1807-12  
 CODEN: ZOKH44; ISSN: 0044-460X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 3217-00-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediylidimino)bis- (9CI) (CA INDEX NAME)



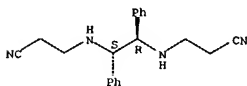
L18 ANSWER 76 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Irradns. of aryl imines which have a nitrile, amide, double bond, or hydroxyl group suitable positioned for interaction with the imine give the meso- and dl-1,2-diamines resulting from reductive dimerization. Nonconjugated diimines give polymeric products. In the case of PhCH=NCH<sub>2</sub>CH<sub>2</sub>CN, the mechanism involves initial formation of α-hydroxy radicals by transfer of a H atom from the alc. solvent to the benzaldehyde sensitizer, sequentially followed by production of α-amino radicals by H transfer from the α-hydroxy radical to the imine and dimerization of the α-amino radicals. One anil and 3 imidates were unreactive under the specified photolysis conditions.

ACCESSION NUMBER: 1970:519880 CAPLUS  
 DOCUMENT NUMBER: 73:119880  
 TITLE: Reductive dimerization of difunctional aryl imines on photolysis  
 AUTHOR(S): Beak, Peter; Payet, Charles R.  
 CORPORATE SOURCE: Dep. of Chem. and Chem. Eng., Univ. of Illinois, Urbana, IL, USA  
 SOURCE: Journal of Organic Chemistry (1970), 35(10), 3281-6  
 CODEN: JOCEAH; ISSN: 0022-3263  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 73:119880  
 IT 25558-15-0P 25558-54-7P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 25558-15-0 CAPLUS  
 CN Propionitrile, 3,3'-[(1,2-dimethyl-1,2-diphenylethylene)diimino]di- (8CI) (CA INDEX NAME)



RN 25558-54-7 CAPLUS  
 CN Propionitrile, 3,3'-[(1,2-diphenylethylene)diimino]di-, meso- (8CI) (CA INDEX NAME)

Relative stereochemistry.

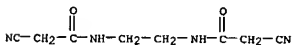


L18 ANSWER 77 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Ethylene sulfide polymers are stabilized against thermal degradation during molding by the addition of polyamines. The polyamines, used at 1-3 weight % concentration, include triethylenetetramine, tetraethylenepentamine, N-(β-hydroxyethyl)diethylenetriamine, 1,1'-ethylenediurea, N,N'-bis(cyanoacetyl)ethylenediamine, N,N'-bis(2-aminoethyl)-4,4'-oxydibenzylamine, and polyamine adducts with ethylene oxide, styrene oxide, acrylonitriles, isocyanates, benzoyl chloride, and acrylamides.

ACCESSION NUMBER: 1970:478133 CAPLUS  
 DOCUMENT NUMBER: 73:78133  
 TITLE: Ethylene sulfide polymers stabilized with polyamine additives  
 INVENTOR(S): Gobran, Riad H.; Bulbenko, George F.; Peterson, Elizabeth A.  
 PATENT ASSIGNEE(S): Thiokol Chemical Corp.  
 SOURCE: U.S., 6 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3522205	A	19700728	US 1968-719839	19680409
PRIORITY APPLN. INFO.:			US 1968-719839	19680409

IT 3216-88-4  
 RL: USES (Uses)  
 (stabilizers, for ethylene sulfide polymers)  
 RN 3216-88-4 CAPLUS  
 CN Acetamide, N,N'-1,2-ethanediylbis[2-cyano- (9CI) (CA INDEX NAME)



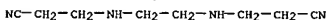
L18 ANSWER 78 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB The disclosure is similar, but the claims are different.

ACCESSION NUMBER: 1970:436211 CAPLUS  
 DOCUMENT NUMBER: 73:36211  
 TITLE: Use of heterocyclic polymers as corrosion inhibitors  
 INVENTOR(S): Annand, Robert R.; Redmore, Derek; Rushton, Brian M.  
 PATENT ASSIGNEE(S): Petrolite Corp.  
 SOURCE: U.S., 10 pp. Division of U.S. 3450646  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

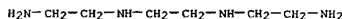
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3514251	A	19700526	US 1969-792799	19690121
PRIORITY APPLN. INFO.:			US 1969-792799	19690121

IT 25609-54-5  
 RL: USES (Uses)  
 (imidazoline group-containing, as corrosion inhibitors)  
 RN 25609-54-5 CAPLUS  
 CN Propionitrile, 3,3'-(ethylenediimino)di-, polymer with triethylenetetramine (8CI) (CA INDEX NAME)

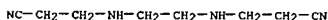
CM 1  
 CRN 3217-00-3  
 CMF C8 H14 N4



CM 2  
 CRN 112-24-3  
 CMF C6 H18 N4



IT 3217-00-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediylidimino)bis- (9CI) (CA INDEX NAME)



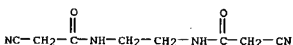
L18 ANSWER 79 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Photocopy compns., insensitive to pH changes, are prepared using 1-diazo-4-morpholino-2,5-diethoxybenzene (I), a blue coupler such as N-(2-aminoethyl)-2-hydroxy-3-naphthamide (II) or 2-hydroxy-N,N-bis(2-hydroxyethyl)-3-naphthamide, and an alkylenebis(2-cyanoacetamide) such as 1,2-bis(2-cyanoacetamido)ethane (III), 1,4-bis(2-cyanoacetamido)-butane, 1,6-bis(2-cyanoacetamido)hexane, 1,2-bis(2-cyanoacetamido)propane, or bis[2-(2-cyanoacetamido)ethyl]amine (IV). For example, 99 g NCCH2CO2Me in 250 ml MeOH was treated with 52 g (H2NCH2CH2)2NH for 1 hr at 40° followed by 50 ml concentrated HCl to give 99 g IV-HCl, m. 192°. A photoprinting base paper precoated with colloidal silica and poly(vinyl acetate) was coated with a solution of tartaric acid 4, thiourea 3, AcOH

1 ml, II-HCl 1, III 1, and I-ZnCl2 salt 1 g in 100 ml. water, dried, imaged, exposed to light and developed with NH3 to give black images with continuous gray tones. Cellulose acetate base was also used to obtain a transparent background.

ACCESSION NUMBER: 1970:17282 CAPLUS  
DOCUMENT NUMBER: 72:17282  
TITLE: Photocopy composition for black images  
INVENTOR(S): Rauhut, Herbert  
PATENT ASSIGNEE(S): Kalle A.-G.  
SOURCE: S. African, 9 pp.  
CODEN: SFXKAB  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

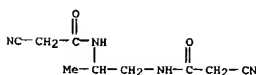
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ZA 6804932		19690121		
DE 1597619			DE	
FR 1582205			FR	
GB 1219628			GB	
US 3615575		19710000	US	
PRIORITY APPLN. INFO.:			DE	19670731

IT 3216-88-4 26889-90-7  
RL: USES (Uses)  
(diaz process coupler)  
RN 3216-88-4 CAPLUS  
CN Acetamide, N,N'-1,2-ethanediybis(2-cyano- (9CI) (CA INDEX NAME)



RN 26889-90-7 CAPLUS  
CN Acetamide, 2-cyano-N-[1-[(cyanoacetyl)amino]methyl]ethyl]- (9CI) (CA INDEX NAME)

L18 ANSWER 79 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



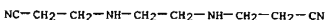
L18 ANSWER 80 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Cyclic amidine polymers were prepared by treating an alkylenediamine with a vinyl nitrile compound. The polymers prevent corrosion of equipment in a water flooding process used in oil fields. Thus, 106.1 g. acrylonitrile was added to 480.8 g. ethylenediamine over 15 min. at 25-30° to yield N-cyanoethyl-1,2-diaminoethane (I). I was heated on 130-55° in the presence of 2 g. thiourea (II) for 10 hrs. and addnl. 2 g. II was added. The total polymerization time was 20 hrs. and the conversion was 96%.

The polymer (mol. weight approx. 800-900) was purified. The polymer and a com. inhibitor were tested on steel samples under conditions to simulate those found in an actual producing well. The polymer had (% protection and ppm. given): 94, 3; 79, 4; 88, 8; 88, 16; 91, 32 compared to 41, 3; 60, 4; 62, 8; 73, 16; 80, 32 for the com. inhibitor. Also N-(2-cyano-2-methylethyl)-1,2-diaminoethane was polymerized and N,N'-bis(cyanoethyl)-1,2-diaminoethane was polymerized with triethylenetetramine.

ACCESSION NUMBER: 1969:461894 CAPLUS  
DOCUMENT NUMBER: 71:61894  
TITLE: Polyamides and related polymers  
INVENTOR(S): Annand, Robert R.; Redmore, Derek; Rushton, Brian M.  
PATENT ASSIGNEE(S): Petrolite Corp.  
SOURCE: U.S., 10 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3450646	A	19690617	US 1965-502447	19651022
PRIORITY APPLN. INFO.:			US 1965-502447	19651022

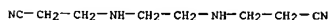
IT 3217-00-3P 25609-54-5P  
RL: PREP (Preparation)  
(preparation of)  
RN 3217-00-3 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



RN 25609-54-5 CAPLUS  
CN Propanenitrile, 3,3'-(ethylenediimino)di-, polymer with triethylenetetramine (8CI) (CA INDEX NAME)

CN 1

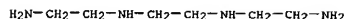
CRN 3217-00-3  
CMF C8 H14 N4



CN 2

L18 ANSWER 80 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

CRN 112-24-3  
CMF C6 H18 N4



$$\text{NC}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{CH}_2-\text{CH}_2-\text{CN}$$
$$\text{NC}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{CH}_2-\text{CH}_2-\text{CN}$$

ANSWER 83 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB CF. CA 65, 10483c. Nitration of NCCH2CH2NHCCH2N (II), NH(CH2CH2CH2N)2 (III), NCCH2NHCCH2I2 (III), NCCH2NHCCH2NHCCH2CH2N (IV), and NCCH2CH2NHCCH2I2 (V) gave the corresponding N-nitro compounds. (Ia-Va) whose Hydrolysis afforded the corresponding N-nitrazidicarboxylic acids: HO2CCH2CH2N(NO2)CH2CO2H (VI), HO2CCH2CH2N(NO2)CH2CH2CO2H (VII), [HO2CCH2N(NO2)CH2I2] (VIII), HO2CCH2N(NO2)CH2CH2N(NO2)CH2CH2CO2H (IX), and HO2CCH2CH2N(NO2)CH2I2 (X). H2NCH2CH2CN (12 g.) dissolved in 14.5 ml. HCl, the solution treated with 11.2 g. KCN in 9 ml. H2O at 10-15° and then for 1 hr. with 13.5 ml. 35% CH2O at 20-5°, the mixture extracted with ClCH2CH2Cl, and the extract treated with 6.5 ml. 65% HNO3 with cooling gave, after dilution with 30 ml. EtOH and cooling to 0°, 10.7 g. nitrate of I, m. 116-18.5° (MeOH); HCl salt of I m. 105-10° (EtOH). Treatment of NCCH2CH2NHCCH2CO2Me (XI) (10 g.) with 3.1 ml. 98% HNO3 in 40 ml. AcOH at 20° gave 94% the nitrate of XI, m. 102-3° (EtOH). Similarly, the nitrate of NCCH2CH2NHCCH2CO2Et (XIIa) was prepared, m. 54-8°; nitrate of NCCH2CH2NHCCH2CO2H, m. 171-3° [aqueous EtOH]; nitrate of II, m. 128-32° (9:1 EtOH-H2O). Treatment of 65.1 g. HCN in 30 ml. H2O at 10-15° and then with 125 ml. 37% CH2O 1 hr. at 10° gave, after extraction with ClCH2I2, 85.4% 1,3-bis(cyanomethyl)imidazolidine, b1.5 144-6°, d2020 1.087, nD20 1.4877; treatment with 65% HNO3 yielded 94.5% dinitrate of III, m. 154-9°. H2NCH2CH2NHCCH2CH2CN (15 g.) neutralized with 13.1 g. concentrated HCl, the solution treated with 8.6 g. KCN in 6 ml. H2O and then with 11 g. 37% aqueous solution of CH2O gave 67.5% IV which treated with 65% HNO3 at 15-20° yielded 80% dinitrate of IV, m. 176-9° (H2O). Dinitrate of V, prepared similarly, m. 221-9° (H2O). Treatment of the nitrate of XI (20.5 g.) with a mixture of 30.2 g. Ac2O, 3.2 g. 99% HNO3, and 0.4 ml. concentrated HCl gave 72% NCCH2CH2N(NO2)CH2CO2Me (XII), b1 155-7°, d2020 1.2945, nD20 1.4812. Similarly, XIIa gave 75% NCCH2CH2N(NO2)CH2CO2Et (XIIb), b1 155-8°, d2020 1.2356, nD20 1.4755. Similar treatment of I-V gave IaVa (1 yields and m.p. given): Ia, 84, 38-40°; IIa, 70, 50-2°; IIIa, 73, 175-82°; IVa, 77, 89-96°; Va, 83, 125-8°. Hydrolysis of XII by heating with concentrated HCl 3 hrs. at 100° gave 80% VI, m. 165-9° (2% HCl). Heating IIIa (m. 150-1°) with concentrated HCl 30 min. at 100° gave 50% VII (H2O); dichloride of VII (with SOCl2) m. 101-7° (ClCH2CH2Cl); di-Me ester m. 83-3° (MeOH). Hydrolysis of IVa with concentrated HCl (3 hrs., 100°) gave 46.5% IX, m. 111-14° (H2O); dichloride m. 62-8° (ClCH2CH2Cl), di-Me ester m. 46-8° (MeOH). Similarly, Va yielded 85.5% X, m. 141-3°; dichloride m. 92-7° (ClCH2CH2Cl); di-Me ester m. 120-4°.

ACCESSION NUMBER: 1966:499003 CAPLUS  
 DOCUMENT NUMBER: 65-99003  
 ORIGINAL REFERENCE NO.: 518495h, 18490a-d  
 TITLE: Syntheses in the field of nitramines. V. Synthesis of nitrazidicarboxylic acids via nitration of aminonitriles  
 AUTHOR(S): Denkshtein, J.; Kaderabek, J.  
 CORPORATE SOURCE: Vys. Skola Chem. Technol., Pardubice  
 SOURCE: Collection of Czechoslovak Chemical Communications  
 (CODEN: 3171), 2915-27  
 (CODEN: CCCPAK; ISSN: 0010-0765)

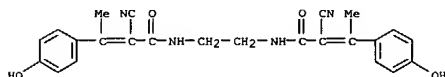
L18 ANSWER 83 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 DOCUMENT TYPE: Journal  
 LANGUAGE: German  
 IT 10526-72-4, Propionitrile, 3,3'-(ethylenediimino)di-, dinitrate  
 (preparation of)  
 RN 10526-72-4 CAPLUS  
 CN  
 NAME)  
 CM 1  
 CRN 7697-37-2  
 CMF H N O3  
  

$$\begin{array}{c} \text{O} \\ || \\ \text{O}=\text{N}-\text{OH} \end{array}$$
  
 CM 2  
 CRN 3217-00-3  
 CMF C8 H14 N4  
  

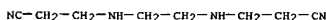
$$\text{NC}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{CH}_2-\text{CH}_2-\text{NH}-\text{CH}_2-\text{CH}_2-\text{CN}$$

L18 ANSWER 84 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB The title compds. are prepared by reaction of a ketone such as 4-hydroxy-acetophenone (I) with (NCCH<sub>2</sub>CO<sub>2</sub>CH<sub>2</sub>)<sub>2</sub> (II), diamide in the presence of an acid catalyst such as AcOH and in the absence or presence of a solvent such as C<sub>6</sub>H<sub>6</sub>. The compds. are essentially colorless and are useful as uv absorbers for inhibiting the degradation of paint, varnish, enamel, polishes, lotions, creams, pigments, plastic, and resin materials.  
 E.g., a mixture comprising I 0.5, II 0.25 mole, 6.0 g. ACONH<sub>4</sub>, 20 cc. AcOH, and 250 cc. C<sub>6</sub>H<sub>6</sub> was refluxed 12 hrs. with stirring. The C<sub>6</sub>H<sub>6</sub> was distilled and the residue was distilled with 200 ml. H<sub>2</sub>O and filtered to give [p-HOC<sub>6</sub>H<sub>4</sub>CMe:C(CN)CO<sub>2</sub>CH<sub>2</sub>]<sub>2</sub> (III). Similarly prepared were [p-HOC<sub>6</sub>H<sub>4</sub>CMe:C(CN)CO<sub>2</sub>CH<sub>2</sub>]<sub>2</sub>CH<sub>2</sub>OH, [p-n-Me(CH<sub>2</sub>)<sub>11</sub>OC<sub>6</sub>H<sub>4</sub>CMe:C(CN)CO<sub>2</sub>CH<sub>2</sub>]<sub>2</sub>, [4-ETO-3-MeC<sub>6</sub>H<sub>3</sub>CMe:C(CN)CO<sub>2</sub>CH<sub>2</sub>]<sub>2</sub>, [4-MeO-3-MeC<sub>6</sub>H<sub>3</sub>CMe:C(CN)CO<sub>2</sub>CH<sub>2</sub>]<sub>2</sub>, Me<sub>2</sub>-4-HOC<sub>6</sub>H<sub>2</sub>CMe:C(CN)CO<sub>2</sub>(CH<sub>2</sub>)<sub>2</sub>, and [p-HOC<sub>6</sub>H<sub>4</sub>CMe:C(CN)CONHCH<sub>2</sub>]<sub>2</sub>.  
 The treatment of III with 10 moles of ethylene oxide in the presence of 1% by weight KOH in an autoclave at 80° gave a product which formed stable oil-in-water emulsions and contained an average of 10 oxyethyl groups  
 ACCESSION NUMBER: 1966:490454 CAPLUS  
 DOCUMENT NUMBER: 65:90454  
 ORIGINAL REFERENCE NO.: 65:16909e-g  
 TITLE: Bis-α-cyano-β-substituted cinnamic acid amides and esters  
 INVENTOR(S): Strobel, Albert F.; Catino, Sigmund C.  
 PATENT ASSIGNEE(S): General Aniline & Film Corp.  
 SOURCE: 7 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

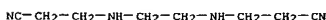
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3272855		19660913	US	19620727
IT 10585-12-3				
(preparation of)				
RN 10585-12-3				
CN 10585-12-3				
Cinnamamide, N,N'-ethylenebis[α-cyano-4-hydroxy-β-methyl- (7CI, 8CI) (CA INDEX NAME)]				



L18 ANSWER 86 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB A series of linear aliphatic triamines and tetramines has been prepared as homologs of the naturally occurring polyamines, spermine and spermidine, by mono- and sym. dicyanoethylation of the appropriate α,ω-alkylenediamines, followed by catalytic reduction of the nitriles. Cyanoethylated derivs. were reduced under unusually mild conditions by means of a com. available sponge Ni catalyst. Hydrochloride salts of all compds. synthesized have been prepared for biol. evaluation. Three triamine trihydrochlorides and 1 tetramine tetrahydrochloride have shown significant in vivo antitumor activity against transplantable mouse tumors. Against KB (human epidermoid carcinoma) cells in a culture system containing calf serum, the synthetic polyamines demonstrate, in general, the same high degree of inhibitory activity shown by spermine and spermidine (I.D.50 = 1.0-3.0 X 10<sup>-5</sup> mmole/ml.).  
 ACCESSION NUMBER: 1964:491954 CAPLUS  
 DOCUMENT NUMBER: 61:91954  
 ORIGINAL REFERENCE NO.: 61:15964f-h  
 TITLE: Analogs of spermine and spermidine. I. Synthesis of polymethylenepolyamines by reduction of α,ω-alkylenediamines  
 AUTHOR(S): Israel, Mervyn; Rosenfield, Joan Samour; Modest, Edward J.  
 CORPORATE SOURCE: Children's Hosp., Boston, MA  
 SOURCE: Journal of Medicinal Chemistry (1964), 7(6), 710-16  
 CODEN: JMCHAR; ISSN: 0022-2623  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 3217-00-3, Propionitrile, 3,3'-(ethylenediimino)di-  
 90345-76-9, Propionitrile, 3,3'-(ethylenediimino)di-, dihydrochloride  
 (preparation of)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



RN 90345-76-9 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis-, dihydrochloride (9CI) (CA INDEX NAME)

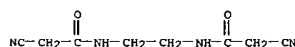


● 2 HCl

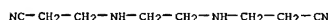
L18 ANSWER 85 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB Ethylene sulfide (I) polymers, which can be molded, are treated with 0.5-3 weight % of an amide, such as an adipamide, a polyamide, an acrylamide, or an amine, such as an alkylamine containing >8 C atoms, an alkylenediamine, an arylenediamine, a hydroxylated amine, a polyalkylene polyamine, or an N heterocyclic compound to give heat-stable compns. Thus, 22.650 kg. I is polymerized for 2 hrs. at 82.22° in 87.8 l. C<sub>6</sub>H<sub>6</sub> in the presence of 2.27 l. Et<sub>2</sub>Zn-H<sub>2</sub>O catalyst (Et<sub>2</sub>Zn-H<sub>2</sub>O mole ratio 1:0.9, 25.2 millimoles Et<sub>2</sub>Zn) to give poly(ethylene sulfide) (II), m. 206-8°. II (10 g.) is mixed with 2.5 weight % adipamide to give a composition of melt index (1 min.) 0.035, as compared with 0.112 for the control.  
 ACCESSION NUMBER: 1965:446752 CAPLUS  
 DOCUMENT NUMBER: 63:46752  
 ORIGINAL REFERENCE NO.: 63:8518h, 8519a  
 TITLE: Ethylene sulfide polymers  
 INVENTOR(S): Osborn, Stephen W.; Peterson, Elizabeth A.; Patarcity, Adam J.; Gobran, Riad H.; Bulbenko, George F.  
 PATENT ASSIGNEE(S): Thiokol Chemical Corp.  
 SOURCE: 41 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 645691		19640925	BE	
PRIORITY APPLN. INFO.:			US	19630325

IT 3216-88-4, Acetamide, N,N'-ethylenebis[2-cyano- 3217-00-3  
 , Propionitrile, 3,3'-(ethylenediimino)di-  
 (ethylene sulfide polymer stabilization by)  
 RN 3216-88-4 CAPLUS  
 CN Acetamide, N,N'-1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)

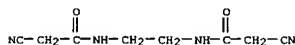


RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



L18 ANSWER 87 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB To a solution of 30 g. ethylenediamine in 65 ml. absolute alc. 56.5 g. NCCH<sub>2</sub>CO<sub>2</sub>Et and 20 drops alc. EtONa was added dropwise with cooling and the mixture stirred 5 hrs. to precipitate N,N'-ethylenebis(2-cyanoacetamide), m. 190°, which when treated with 4,6-diamino-5-nitroso-2-phenylpyrimidine (U.S. 3,122,540, 3rd preceding abstract) gave N,N'-ethylenebis(4,7-diamino-2-phenyl-6-pteridinecarboxamide), m. 360° (HCO-NMe<sub>2</sub>).  
 ACCESSION NUMBER: 1964:68285 CAPLUS  
 DOCUMENT NUMBER: 60:68285  
 ORIGINAL REFERENCE NO.: 60:12030f-g  
 TITLE: N,N'-Ethylenebis(4,7-diamino-2-aryl-6-pteridinecarboxamides)  
 INVENTOR(S): Osdone, Thomas S.  
 SOURCE: 2 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Unavailable  
 PATENT INFORMATION:

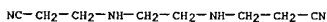
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3122545		19640225	US	19621119
IT 3216-88-4				
(preparation of)				
RN 3216-88-4				
CN 3216-88-4				
Acetamide, N,N'-1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)				



L18 ANSWER 88 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
AB cf. CA 56, 11839d. N-Alkylamines (including quaternary ammonium salts), N- and O-cyanoethyl amines, and thiuronium salts were synthesized. Thus, H2NCH2CH2NCH2CH2 (I), b. 145-7°, was prepared in 45% yield by treating K phthalimide with BrCH2CH2Br (II) followed by reaction of the resulting N-(β-bromoethyl)phthalimide, m. 81°, with HNET2 and saponifying; Me2NCH2CH2NMe2 (III), b. 120-2°, in 89% yield by tetramethylation of I with HCO2H and HCHO; Et2NCH2CH2NHEt, b.p. 100° in 22% yield by ethylation of II in EtOH with EtI and KOH; [EtMe2N+CH2CH2N+Me2Et] 2Br-, needles (EtOH), m. 242-2.5°, in 75% yield from III and EtBr in iso-PrOH under reflux; [Bu3N+CH2CH2N+-Bu3] 2Br-, a dark viscous liquid in 88% yield from I and BuBr in dioxane and KOH in EtOH under reflux; [n-C6H13(n-C8H17)2N+CH2CH2N+(n-C8H17)2(n-C6H3)] 2Br-, a red-brown viscous liquid, in 70% yield from II in dioxane and n-C8H17Br and NaOH in EtOH followed by n-C6H13Br; HN(CH2CH2CN)2, b.p. 173-5°, in 40% yield from acrylonitrile (IV) and aqueous NH3 at 40°; EtN(CH2CH2CN)2, b.p. 183-5°, in 58% yield from IV and EtNH2 at room temperature; Et2NCH2CH2CN, b.p. 83.5-5.3°, in 90% yield from IV and Et2NH at room temperature; (HOCH2CH2)2NCH2CH2CN, in 98% yield from IV and HN(CH2CH2OH)2; NCCH2CH2NHCCH2CH2NHCCH2CH2CN, b.p. 184° in 95% yield from II and IV at 30°; Et2NCH2CH2NHCCH2CH2CN, b.p. 103-4°, in 91% yield and Et2NCH2CH2N(CH2CH2CN)2, b.p. 175°, in 8% yield from I in dioxane and IV under reflux; Et(NCCH2CH2)NCH2CH2N(CH2CH2CN)Et, b.p. 164-80°, in 43% yield from EtHNCH2CH2NHEt and IV under reflux; (NCCH2CH2NHCCH2CH2)2NH, a pale-red viscous oil, in 99% yield from IV and diethylenetriamine (V)

at 50°; [Et(NCCH2CH2)NCH2CH2]2NH, b.p. 183-4°, in 91% yield from IV and (EtHNCH2CH2)2NH under reflux; N, N, N', N''-pentakis(β-cyanoethyl)triethylenetetramine, red-brown viscous liquid, 99% yield from IV and V; Et2NCH2CH2NHCCH2CH2CN, b.p. 120-20.8°, in 72% yield from Et2NCH2CH2OH, IV, and NaOEt; S-(β-diethylaminoethyl)thiuronium chloride, m. 194°, in 25% yield from β-diethylaminoethyl chloride and thioacetone. The cyanoethylation occurred at <40° when the pKa of an amino group was >8.0, occurred at the b.p. when the pKa was 8.0-4.5, and took place with difficulty even at the b.p. when the pKa was <4.5.

ACCESSION NUMBER: 1964:60426 CAPLUS  
DOCUMENT NUMBER: 60:60426  
ORIGINAL REFERENCE NO.: 60:10542c-g  
TITLE: Amine assistants for dyeing. II. Synthesis of amine assistants for dyeing of polyacrylonitrile fibers  
AUTHOR(S): Oda, Ryohel; Yoshida, Zenichi; Osawa, Eiji  
CORPORATE SOURCE: Univ. Kyoto, Japan  
SOURCE: Kogyo Kagaku Zasshi (1960), 63(9), 1593-7  
CODEN: KKGZ7; ISSN: 0368-5462  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
IT 3217-00-3, Propionitrile, 3,3'-(ethylenediimino)di- (preparation of)  
RN 3217-00-3 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



L18 ANSWER 89 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
AB Treatment of (CH2NHCCH2CH2CN)2 in AcOH with concentrated HNO3 at 15-20° gave a precipitate of the dinitrate, m. 199°, which, added to Ac2O in the presence of catalytic amount of HCl, followed by a catalytic amount of fuming HNO3 at 15°, 2 hrs., gave on chilling and dilution 37.4% [CH2N(NO2)CH2CH2CN]2, m. 129°, also formed in 95.9% yield by addition of CH2:CHCN followed by Et2NH (with Et3N the yield was 91%) to (CH2NHNH)2  
in H2O, finally 10-12 hrs. on a steam bath. Hydrolysis of the nitrile on a steam bath 6-8 hrs. with concentrated HCl gave 80% [CH2N(NO2)CH2CH2CO2H]2, m. 142°. Similarly were prepared: (CH2)3(NHCCH2CH2CN)2.2HNO3, 82%, m. 188°; 88% (CH2)3[N(NO2)CH2CH2CN]2, m. 77°; 87% (CH2)3[N(NO2)CH2CH2CO2H]2, m. 141° (di-Me ester m. 54-5% converted into the dihydrazide, m. 151°).  
ACCESSION NUMBER: 1963:72901 CAPLUS  
DOCUMENT NUMBER: 58:72901  
ORIGINAL REFERENCE NO.: 58:12413c-e  
TITLE: Synthesis of dinitrodiazadicarboxylic acids  
AUTHOR(S): Ivanova, I. S.; Bogdanova, G. F.; Alekseeva, T. A.; Novikov, S. S.  
CORPORATE SOURCE: N. D. Zelinskii Inst. Org. Chem., Moscow  
SOURCE: Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1962) 2236-8  
CODEN: TASK6; ISSN: 0002-3353  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
IT 10526-72-4, Propionitrile, 3,3'-(ethylenediimino)di-, dinitrate (preparation of)  
RN 10526-72-4 CAPLUS  
CN Propionitrile, 3,3'-(ethylenediimino)di-, dinitrate (8CI) (CA INDEX NAME)

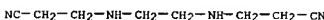
CM 1

CRN 7697-37-2  
CMF H N O3

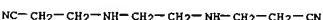


CM 2

CRN 3217-00-3  
CMF C8 H14 N4



L18 ANSWER 90 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
AB cf. CA 55, 434g. Refluxing p-toluidine with aqueous RCH2CH2CN 20 hrs. gave N-2-cyanoethyl-p-toluidine, m. 104°, in the following yields (R shown): Cl, 87.5%; Br, 84.4%; iodine, 84.4%; HO, trace; MeO, 17.2%; EtO, 18.7%; PrO, 15%; iso-PrO, 9.3%; CH2:CHCH2O, 9.3%; BuO, 11.2%; iso-BuO, 10.9%; MeEtCHO, 10.8%; AmO, 10%; iso-AmO, 10%; C6H13O, 9.3%; C8H17O, 15%; ClOEt2O, 9.3%; MeOCH2 CH2O, 31.2%; EtOCH2CH2O, 31.2%; MeOCH2CH2OCH2CH2O, 35.9%; NCCH2CH2O, 32.8%; NCCH2CH2OCH2CH2O, 22.8%; NCCH2CH2OCMeCH2O, 20.6%  
NCCH2CH2OCH2CH2OCH2CH2O, 48.4%; NCCH2CH2OCH2CH2OCH2CH2CN, 26.5%; C6H11O, 19.3% N2N, 21.9%; NCCH2CH2NH 32% (NCCH2CH2)2N, 35.2%; MeNH, 62.5%; NCCH2CH2NMe, 52%; HOCH2CH2NCH2CH2CH, 53.9%; HOCH2CH2NH, 62.5% (HOCH2CH2)2N, 60.9%; BuNH, 63.7% PhCH2NHCCH2CH2CN, 57.2%; Me2N, 65.9%; Et2N, 93.7%; NCCH2CH2NHCCH2CH2NH, 79.7%; (NCCH2CH2)2NCH2CH2N(CH2CH2CN), 64.0%; H2NCH2CH2NH, 78.1%; (CH2)5N, 76.5%; N-pyrrolidyl, 61.8%; morpholino, 76.5%; MeS, 10%; EtS, 10%; HOCH2CH2S, 15%; PhS, 15%; PhO, 61.5%; o-MeC6H4O, 45.3%; p-isomer, 42.8%; p-isomer, 42.8%; 1-C10H7O, 45%, and 2-isomer, 31.3%; o-HOC6H4O, 50% (m-isomer, 53.9%; p-isomer, 53.1%). Reactions of halopropionitriles, S-cyanoethyl compds. or cyanoethyl phenol ethers were run without catalyst; others employed either concentrated HCl, NaOH, or Et3N in catalytic ams.  
ACCESSION NUMBER: 1963:20518 CAPLUS  
DOCUMENT NUMBER: 58:20518  
ORIGINAL REFERENCE NO.: 58:3348e-h  
TITLE: Cyanoethylation of p-toluidine by β-substituted propionitriles  
AUTHOR(S): Butskus, P. F.; Stonite, R. Yu.; Denis, G. I.; Butskene, A. I.  
CORPORATE SOURCE: State Univ., Vilnius, Lithuania  
SOURCE: Zhurnal Obshchei Khimii (1962), 32, 820-3  
CODEN: ZOKH4; ISSN: 0044-460X  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
OTHER SOURCE(S): CASREACT 58:20518  
IT 3217-00-3, Propionitrile, 3,3'-(ethylenediimino)di- (reaction with p-toluidine)  
RN 3217-00-3 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



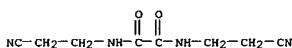
L18 ANSWER 91 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
AB Condensation of N-substituted 3-aminopropionitriles with (CO2Et)2 yielded N-substituted 4-cyano-2,3-dioxypyrrrolidines. The application of this reaction to the synthesis of pyrrolizidine and octahydroprocaine ring systems was described. The relationship of synthetic di-1-hydroxymethyl-2-hydroxypyrrrolizidine (I) to the Senecio bases macronecine, hastanecine, or turnerforidine was discussed. Et aspartate (6.3 g.) and 4.9 g. (CO2Et)2 refluxed 1 hr. with 0.77 g. Na in 30 cc. absolute EtOH, evaporated, and acidified with 10% HCl gave 8.6 g. 4,5-dicarbethoxy-2,3-dioxypyrrrolidine (II), m. 127-8° (C6H6- petr. ether). II (4 g.) in Et2O added to 2 g. CH2N2 and the mixture distilled after 20 min. yielded 4.1 g. 4,5-dicarbethoxy-2-oxo-3-methoxy-3-pyrroline, b.p. 171-4°, m. 67.5-8.5° (C6H6 petr. ether). (CO2Et)2 (3.7 g.) shaken 10 min. with 0.56 g. Na in 20 cc. absolute EtOH, treated dropwise rapidly with stirring with 5 g. Et β-aminoglutaconate, the mixture kept 1 hr., filtered, the residue washed with Et2O, and treated with 10% HCl gave 5.5 g. 4-carbethoxy-5-carbethoxymethylene-2,3-dioxypyrrrolidine (III), m. 210-11° (EtOH). CH2N2 (2 g.) in Et2O added dropwise to 2.5 g. III in Et2O yielded 1.9 g. EtO2CCONHCMe:CHCO2Et, m. 105-6° (EtOH). (CO2Et)2 (4.0 g.) added to KOEt from 1.3 g. K and 9 cc. absolute EtOH in 50 cc. dry Et2O, the mixture shaken 5 min., treated dropwise with 4.3 g. H2NCH: CHCO2Et, filtered, and the residual K salt (6.1 g.) acidified with 10% HCl yielded 3.5 g. EtO2CCONHCMe: CHCO2Et, m. 57-8°, which resisted cyclization with KOEt. (CO2Me)2 (11.8 g.) shaken a few min. with 5.4 g. NaOMe in 50 cc. dry Et2O, the mixture treated dropwise with 8.4 g. MeCH(CH2)2CN in 30 cc. dry Et2O at such a rate as to maintain reflux, refluxed 0.5 hr., filtered, and the residue treated with 10% HCl gave 11.2 g. 4-cyano-2,3-dioxo-1-methylpyrrolidine (IV), prisms, m. 189-90° (EtOH). Similarly were prepared 67.2% 1-Et homolog of IV, m. 200-1°, and 58.5% 1-(NCCH2CH2) analog (V) of IV, m. 175-6°. (CO2Et)2 (7.3 g.) shaken a few min. with 1.2 g. Na in 50 cc. absolute EtOH, treated with 8 g. PhCH2NH(CH2)2CN, the mixture refluxed 2 hrs., evaporated, and acidified with 10% HCl gave 7.5 g. 1-PhCH2 analog of IV, m. 186-7° (EtOH). Similarly were prepared 75.0 and 58.5% IV and V, resp. In the same manner was prepared 66.0% 1-cyclohexyl analog of IV, m. 169°. V (2.0 g.) in 30 cc. Et2O added to CH2N2Et2O and the mixture kept 4 hrs. at room temperature gave 4-cyano-3-methoxy-2-oxo-1-(2-cyanoethyl)-3-pyrroline, m. 158-9° (95% EtOH). H2N(CH2)3CO2Et (1 g.) and 0.2 g. Na in 10 cc. absolute EtOH treated dropwise with 1 g. (CO2Et)2, the mixture refluxed 0.5 hr., and kept overnight yielded 0.5 g. [CONH(CH2)3CO2Et]2, needles, m. 107-8°. (CO2Me)2 (23.6 g.) and then 14 g. H2NCH2CH2CN added with stirring to 10.8 g. NaOMe in 100 cc. absolute Et2O, the mixture refluxed 10 min., and the precipitate treated with 10% HCl gave 15.5 g. (CONHCH2CH2CN)2, m. 244-5° (H2O). Et 2-pyridylacetate (5 g.) in 30 cc. AcOH

L18 ANSWER 91 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)  
hydrogenated 3 hrs. over 0.5 g. 5% Rh-Al2O3 yielded 4.8 g. Et  
2-piperidylacetate (VII), b33 119-23°. VI (1.1 g.) and 1.0 g.  
[CO2Et]2 refluxed 3 hrs. with 0.18 g. Na in 15 cc. abs. EtOH and the ppt.  
treated with 10% HCl gave 1.0 g. 1-carbethoxy-2,3-  
dioxooctahydropyrrocoline, m. 113-14° (H2O). Et 2-pyrrol-  
ylacetate (11.5 g.) in 40 cc. AcOH hydrogenated 1.5 hrs. at 30 lb. over  
2.0 g. 5% Rh-Al2O3, filtered into 30 cc. 20% HCl, washed with Et2O,  
basified with solid K2CO3, and extd. with CHCl3 gave 7.2 g. Et  
2-pyrrolidylacetate (VII), b0.2 50-1°, n20D 1.4485; picrolonate m.  
150-1.5° (EtOH). VII (6.8 g.) and 7.0 g. [CO2Et]2 added with  
stirring and cooling to 1.4 g. Na in 40 cc. abs. EtOH, the mixt. refluxed  
4 hrs., evapd., and the gummy residue treated with 30 cc. 20% HCl gave

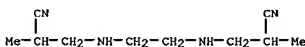
7.5 g. 1-carbethoxy-2,3-dioxopyrrolizidine (VIII), needles, m. 119-20°  
(C6H6-petr. ether). VIII (3 g.) with CH2N2-Et2O yielded 2.8 g.  
1-carbethoxy-2-methoxy-3-oxopyrrolizid-1,2-ene, b0.7 185-7°. VIII  
(3.0 g.) in 20 cc. dry tetrahydrofuran reduced with 1.6 g. LiAlH4 in 50  
cc. tetrahydrofuran gave 0.9 g. mixt. of bases, b1° 93-5°,  
which yielded the picrate of C8H13NO, m. 166-8° (abs. EtOH): a  
0.4-g. portion of the base in 25 cc. abs. EtOH hydrogenated under ambient  
conditions over 0.1 g. PtO2 during 0.5 hr. gave an oil, which yielded the  
picrate of C8H16NO, m. 184-5° (EtOH-Et2O). VIII (5.0 g.) in 40 cc.  
AcOH hydrogenated 0.5 hr. at 20 lb. initial pressure over 1.5 g. 5%  
Rh-Al2O3 yielded 4.2 g. 1-carbethoxy-2-hydroxy-3-oxopyrrolizidine (IX),  
platelets, m. 137.5° (C6H6-petr. ether). IX (5.0 g.) in 75 cc.  
tetrahydrofuran refluxed 4 hrs. with stirring with 3.0 g. LiAlH4 in 75

cc. tetrahydrofuran gave 2.8 g. I, prisms, m. 123-4° (Me2CO); I.HCl m.  
111-12.5° (EtOH-Et2O); picrate, yellow prisms, m. 166-7°  
(EtOH-Et2O). I (1.3 g.) in 5 cc. CHCl3 refluxed 4 hrs. with 3 cc. SOCl2  
and the resulting oil treated with picric acid in EtOH gave the picrate of  
1-chloromethyl-2-chloropyrrolizidine, m. 168-9° (EtOH).

ACCESSION NUMBER: 1962:18224 CAPLUS  
DOCUMENT NUMBER: 56:18224  
ORIGINAL REFERENCE NO.: 56:3437C-1,3438A-C  
TITLE: Synthesis of substituted pyrrolidines and  
pyrrolizidines  
AUTHOR(S): Adams, Roger; Miyano, Seiji; Nair, M. D.  
CORPORATE SOURCE: Univ. of Illinois, Urbana  
SOURCE: Journal of the American Chemical Society (1961), 83,  
3323-7  
CODEN: JACSAT; ISSN: 0002-7863  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
OTHER SOURCE(S): CASREACT 56:18224  
IT 90953-13-2, Oxamide, N,N'-bis(2-cyanoethyl)-  
(preparation of)  
RN 90953-13-2 CAPLUS  
CN Oxamide, N,N'-bis(2-cyanoethyl)- (7CI) (CA INDEX NAME)



L18 ANSWER 92 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)  
hydrogenated over Raney Ni, saponified, and acidified to give XI.  
ACCESSION NUMBER: 1960:28184 CAPLUS  
DOCUMENT NUMBER: 54:28184  
ORIGINAL REFERENCE NO.: 54:5457e-1,5458a-c  
TITLE: Synthesis and configuration of 3,5-dimethylpimelic  
acids and the four optically active methyl hydrogen  
3,5-dimethylpimelates  
AUTHOR(S): Ahlquist, Lars; Asselineau, Jean; Asselineau, Cecile;  
Serck-Hanssen, Klaus; Stallberg-Stenhagen, Stina;  
Stenhagen, Einar  
SOURCE: Arkiv for Kemi (1959), 14, 171-93  
CODEN: ARKEAD; ISSN: 0365-6128  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
IT 85135-00-8, Propionitrile, 3,3'-(ethylenediimino)bis[2-methyl-  
(preparation of)  
RN 85135-00-8 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis[2-methyl- (9CI) (CA  
INDEX NAME)



L18 ANSWER 92 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
AB 3,5-Me2C6H9OH, m. 62-3°, in 200-g. lots, was hydrogenated over  
Raney Ni (from 25 g. alloy in 75 cc. EtOH) in a 1-l. rocking autoclave (H  
pressure of 150 kg./sq. cm.) at 180°. The product, isomeric  
3,5-Me2C6H9OH (I), b10 75-6°, n25D 1.4530, kept overnight at  
10° deposited crystals (II) at -25°, m. 38.0-8.5°  
[light petroleum (b. 20-40°)], cis compound II (100 g.) was treated  
with 133 g. K2Cr2O7 and 76 cc. H2SO4 in 1700 cc. H2O and shaken 10 min.  
cis-3,5-dimethylcyclohexanone (III) was steam distilled, then extracted  
with ether, dried over K2CO3 and redistd., b65 102°, yield 83%; oxime m.  
76.4-72° (from which pure III, n25D 1.4398, was regenerated by  
[CO2H]2 hydrolysis). EtONa, from 46 g. of Na in 600 cc. dry EtOH, cooled to  
10°, was treated with an ice-cold mixture of 252 g. III and 292 g.  
of [CO2Et]2 during 15 min. and then stirred 75 min. Stirring was  
continued as the solution warmed to room temperature until increasing  
viscosity made this impossible. After 3 hrs. at room temperature 56 cc. of H2SO4  
and 436 g. ice was added, the whole transferred to a large flask and cold  
H2O added (4 l. total volume). The heavy oil was separated and the H2O  
layer extracted with 4 portions of C6H6 (500 cc. each). These exts. were  
combined with the oil and washed twice with 200 cc. of H2O. C6H6 was distilled, a  
trace of Fe powder and 0.5 g. glass powder added to the residue, and  
distillation continued at 15 mm. CO evolution began at 125°; the  
distillate, Et cis-2,4-dimethyl-6-oxocyclohexanecarboxylate (IV), was  
collected up to 140°. IV treated with NaOH, then MeOH and H2SO4,  
yielded di-Me meso-3,5-dimethylpimelate, b8 121.5°, b0.3  
96°, n25D 1.4325; mono-Me ester (V), n22D 1.4332, d22 1.002; free  
acid (VI) m. 99.3-9.6°. V was also prepared by esterification of VI  
(racemic), b0.3 139-40°, n25D 1.4433, n22D 1.4438, d22 1.037  
(erythro), and was resolved by the use of cinchonidine, and crystallized  
from Me2CO-H2O. The phenethylamine salt was also prepared L-VI b0.2 98°,  
n25D 1.4430, d25, 1.040, [M]22D -3.96°; D-VI had identical  
properties except n25D 1.4431. L-VI was esterified to the inactive di-Me  
ester, DL-VI m. 139.9-40.5°; mono-Me ester (threo) b0.8  
122.5°, n25D 1.4431; (-)-3L,5D-dimethyl-6-methoxycarbonylcyclohexanoic  
acid (VII), n25D 1.4430, d25 1.0414, [M]25D -50.5°;  
(-)-3L,5D-dimethylpimelic acid (VIII), [M]23D -60.4°; (-)-di-Me  
3L,5D-dimethylpimelate (IX) b10 114°, n25D 1.4331, d25 0.991,  
[M]26D -46.7°; (+)-3D,5L-VIII m. 86.4-7.1°, [M]23D  
-60.3°; (+)-3D,5L-IX b10 74-80°, [M]25D 46.5°;  
(+)-3D,5L-VII b0.2 91°, n26D 1.4427, [M]26D 50.3°. V,  
treated with NaOH, then AgNO3, and then Br2 in CCl4, gave Me  
(+)-3D,5D-dimethyl-6-bromohexanoate (X). b12 113-6°, n22D 1.4620,  
d22 1.231, [M]23.5D 10.6°. Hydrogenation of X with EtOH and Raney  
Ni gave (+)-3D,5D-dimethylhexanoic acid (XI), b. 120-30° (air  
bath), n25D 1.4239, n22D 1.4245, d22 0.9103, [M]24D 18.4°;  
p-phenylphenacyl ester m. 59-60°, [M]20D 32°. Similar  
correlations were obtained with the (-)-compound (+)-Me

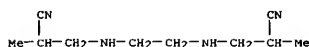
3D-methyl-4-carboxy-  
butanoate was converted to the acid chloride with (COCl)2, which was then  
treated with MeMgI to yield the lactone of  
3D,5-dimethyl-5-hydroxyhexanoic  
acid (XII), b. 220-30°, n23D 1.4473, d23 0.982. XII was treated  
with SOCl2 to give an unsatd. compound, b165 135°, which was

L18 ANSWER 93 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
AB cf. C.A. 49, 8047a. Unsuccessful attempts were made to prepare homologs  
of ethylenediaminetetraacetic acid (EDTA) in which -CH2CO2H groups were  
replaced by -CHMeCO2H or -CH2CHMeCO2H. Partial substitution to N,N'  
derivs. was achieved to yield metal complexes with stabilities less than  
those of EDTA. Attempts to prepare a homolog of anthranilic  
acid-N,N'-diacetic acid gave only α-(o-carboxyanilino)propionic acid  
whose metal complexes were weaker than those of N-substituted glycines.  
Thus, to 54 g. α-chloropropionic acid neutralized with NaOH, 6.0 g.  
ethylenediamine was added and the mixture diluted to 165 ml. At 80-100°  
an almost saturated solution NaOH (20 g.) was added while the pH was  
held between phenolphthalein and thymolphthalein, change points until 30 min. after all  
NaOH was added. It was then cooled and acidified to pH 2 to yield  
ethylenediamine-N,N'-di-α-propionic acid (I), m. 260-5°  
(decomposition) (H2O). As an alternate preparation of I, 14.7 g.  
freshly distilled MeCHO (II) in 200 ml. H2O was added at 0° during 24 hrs. to a  
stirred 200 ml. solution of 33.3 g. ethylenediamine, 110 g. KCN and 7.0  
g. NaOH. Distillation at 60° in vacuo gave 200 ml. of distillate, which was  
treated by a similar addition of more II. These cycles were repeated  
until 1.33 moles II were added. The final solution was adjusted to pH 2 to  
yield 3

g. I. Solns. of 13.7 g. anthranilic acid and 54 g. α-  
chloropropionic acid were separately neutralized with Na2CO3, were mixed,  
diluted to 450 ml., heated under reflux while 8 g. NaOH in 100 g. H2O was  
added during 48 hrs., cooled and acidified to pH 5 to yield 5.3 g.  
α-(o-carboxyanilino)propionic acid, m. 178-80° (decomposition)  
(H2O). N-Methylaniline (21.4 g.) 46 g. Me bromoacetate, 45 g. anhydrous  
K2CO3 and 150 ml. dry Et2O were refluxed 2 weeks to yield Me  
N-methylanilinoacetate, b1 100-2°. Methacrylonitrile (200 g.) was  
added dropwise to 30 g. ethylenediamine (containing as a catalyst 0.57 g.  
Na in min. alc.). The mixture refluxed 18 hrs., kept 1 week, and  
fractionated yielded 19 g. N,N,N',N'-tetrakis-(2-  
cyanopropyl)ethylenediamine, b1 160-70°, and 34.5 g.  
N,N'-bis(2-cyanopropyl)ethylenediamine, b1 103-4°.

ACCESSION NUMBER: 1960:28183 CAPLUS  
DOCUMENT NUMBER: 54:28183  
ORIGINAL REFERENCE NO.: 54:5457a-e  
TITLE: Steric hindrance in analytical chemistry. IV. Some  
sterically hindered complexons  
AUTHOR(S): Irving, H.; Shelton, R.; Evans, R.  
CORPORATE SOURCE: Univ. Oxford, UK  
SOURCE: Journal of the Chemical Society, Abstracts (1958)  
3540-9  
CODEN: JCSAAZ; ISSN: 0590-9791  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
IT 85135-00-8, Propionitrile, 3,3'-(ethylenediimino)bis[2-methyl-  
(preparation of)  
RN 85135-00-8 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis[2-methyl- (9CI) (CA  
INDEX NAME)



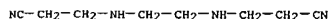


L18 ANSWER 94 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
114-15°; some 22% is formed by refluxing 5 g. piperidine with 5 g. HOCH<sub>2</sub>CH<sub>2</sub>CN 3 hrs. at 120-50°; if Sn dust is added the yield is 52.3%. An extensive study showed that the reaction of I with PhNHET is best carried out by heating in an ampul 100 hrs. on steam bath in the presence of 3% Ac<sub>2</sub>O and a little hydroquinone, when 65-70% PhEtNCH<sub>2</sub>CH<sub>2</sub>CN, b8 158°, b11 164-5°, nD<sub>20</sub> 1.5503, d<sub>20</sub> 1.0260, is obtained; HCl salt, hygroscopic solid; picrate, oil; the free base couples with diazotized sulfanilic acid even in acid medium and the coupling product, isolated as the Na salt, is a green solid, giving a brown color in acid soln. Coupling with diazotized p-O<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>Me gave a brown product, C<sub>17</sub>H<sub>17</sub>O<sub>2</sub>N<sub>5</sub>, while tetrazotized benzidine reacts only slowly in acidified soln., yielding a red-violet soln. which turns yellow in neutral or basic soln.; the free azo deriv. is sol. in org. solvents. Hydrolysis of PhEtNCH<sub>2</sub>CH<sub>2</sub>CN is very slow with H<sub>2</sub>O at 100° in a sealed tube; concd. HCl at room temp. acts slowly and incompletely even in 48 hrs., while heating at 110-20° leads to loss of PhNHET; heating with 30-40% H<sub>2</sub>SO<sub>4</sub> gives an impure product. Alk. hydrolysis gives low yields of the corresponding acid. Refluxing 14 g. PhEtNCH<sub>2</sub>CH<sub>2</sub>CN and 20 g. KOH in 20 ml. H<sub>2</sub>O and 70 ml. EtOH 15 hrs., acidifying with HCl, and repeatedly extg. with iso-BuOH, adding Et<sub>2</sub>O to the ext. gave 33.1% PhEtNCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>HCl, a high-melting solid, giving a brown color with FeCl<sub>3</sub>. This couples even in acid soln. with diazotized sulfanilic acid, yielding a red azo deriv. PhEtNCH<sub>2</sub>CH<sub>2</sub>CN (4.5 g.) added slowly to 15 ml. concd. H<sub>2</sub>SO<sub>4</sub>, and the mixt. let stand 40 hrs., then dild. with H<sub>2</sub>O (50 ml.), neutralized with concd. NH<sub>4</sub>OH, and let stand overnight giving a ppt. of PhEtNCH<sub>2</sub>CH<sub>2</sub>CONH<sub>2</sub>, 68.5-76.5%, m. 55-8° (crude), m. 67° (from MeOH). I (35 g.) added to 20 g. dry (CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub> dropwise with cooling at 15-20° over 2 hrs. the mixt. shaken 2 hrs. at room temp. and let stand overnight in a stoppered flask gave 39.8% H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>CN, b1.5 101°, nD<sub>20</sub> 1.4727, d<sub>20</sub> 0.9912 (with Me<sub>2</sub>Nl at room temp. only the primary amino group reacts, while at 100° all active H can be detd.) (the picrate and styphnate are oils, while HCl salt is a viscous mass), and 59.8% (CH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>CN)<sub>2</sub>, b1.5 174°, b3.5 191°, nD<sub>20</sub> 1.4793, d<sub>20</sub> 1.0256 (picrate and styphnate, oils; HCl salt, m. 184-7° (decompn.)). The structure of the latter appears confirmed by the improbability of reaction of I with a cyanoethylated group, and further by the reaction with Me<sub>2</sub>Nl which indicates 1.94 active H atoms/mole at 100° and 0.5 at room temp. Me<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CN treated with MeI in C<sub>6</sub>H<sub>6</sub> with cooling gave the methiodide, m. 153° (from MeOH); EtI at room temp. yielded the ethiodide, m. 128.5° (from MeOH); EtBr at 60° yielded the ethobromide, m. 157° (from Et<sub>2</sub>O-MeOH); PrBr and CH<sub>2</sub>-CH<sub>2</sub>CH<sub>2</sub>Cl at 80° yielded the corresponding quaternary salts, m. 189° (from Et<sub>2</sub>O-MeOH), and 185-7° (from MeOH), resp. Et<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CN with MeI at room temp. gave the methiodide, m. 152° (from MeOH), while EtI at 60° gave the ethiodide, m. 168° (from MeOH). (CH<sub>2</sub>)<sub>5</sub>NCH<sub>2</sub>CH<sub>2</sub>CN with MeI at 100° gave the methiodide, m. 152° (from MeOH), while EtI reacted slowly at 100° yielding the ethiodide, m. 160-1° (from MeOH). Reduction of H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CN with BuOH-Na gave variable yields when com. Na was used, because of traces of K (Dzirkal, C.A. 36, 2255.6); a 2% K-Na alloy gave high yields comparable to those obtained with pure Na. In the best procedure 30 g. of this alloy was rapidly treated with 14 g. H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CN in 450 ml. BuOH, and despite vigorous reaction the mixt. was immediately

L18 ANSWER 94 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
cf. C.A. 41, 1609h; 42, 3722g. Dissertation at the University (1946)  
with complete exptl. details and bibliography of 169 references. A laboratory preparation of CH<sub>2</sub>:CHCN (I) was developed as follows. To a hot saturated solution of 100 g. SnCl<sub>2</sub> was added 30 g. Zn dust with stirring and, after completion of reaction, the mixture was allowed to stand 2 hrs., decanted, washed with 10% AcOH, let stand overnight with 60 ml. 80-90% AcOH, filtered, washed with H<sub>2</sub>O until neutral, and washed with EtOH and Et<sub>2</sub>O, giving 30-35 g. Sn dust. All traces of Zn must be removed for good results with this catalyst. Heating 50 g. HOCH<sub>2</sub>CH<sub>2</sub>CN with 5 g. of the above Sn dust in a distillation apparatus with chilled receiver so that vapor temperature is below 110° yields a 2-layer distillate: the upper layer after drying with CaCl<sub>2</sub> yields up to 90% I. If com. ethylene oxide is used in the preparation of the cyanohydrin, the product may be contaminated with MeCN:CHCN, H<sub>2</sub>O, and NH<sub>3</sub>; it is purified by 5-10 min. treatment with P<sub>2</sub>O<sub>5</sub> and distillation (b758 78°). Refluxing the cyanohydrin with silica gel, activated C, MgSO<sub>4</sub>, Fe oxides, pieces of sheet Fe, Al foil, and Al<sub>2</sub>O<sub>3</sub> gave but 0-30% yields of I. Passage of the cyanohydrin over Al<sub>2</sub>O<sub>3</sub> at 200-20° gave but 18-20% I. To 950 ml. aqueous NH<sub>4</sub>OH (saturated in the cold) was added 95 g. I dropwise with cooling over 2 hrs. so that the mixture remained homogeneous: after 30 min. at room temperature, distillation gave 30% H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CN, b14 77-8°, b23 89°, nD<sub>20</sub> 1.4390, d<sub>20</sub> 0.9584, which polymerized in several days in a sealed ampul even in darkness. Distillation of the higher-boiling residue gave 47% HN(CH<sub>2</sub>CH<sub>2</sub>CN)<sub>2</sub>, b14 177-9°, b22 209-11°, nD<sub>20</sub> 1.4630, d<sub>20</sub> 1.0196; HCl salt, m. 147-8° (from MeOH); N-Bz derivative, m. 112° (from MeOH). The free amine generated by addition of 50% aqueous Me<sub>2</sub>NNH to solid NaOH was fed into 106 g. I with ice cooling over 6-8 hrs. and the mixture distilled after 2 hrs. at room temperature yielding 80-1% Me<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CN, b750 171°, nD<sub>20</sub> 1.4283, d<sub>20</sub> 0.8705; picrate, m. 151°; HCl salt, m. 199° (from MeOH). A mixture of 40 g. Et<sub>2</sub>NNH and 26.5 g. I gave a slight heat evolution after 5-10 min.; refluxed on a steam bath 2 hrs. (yellow color) and distilled, it yielded 89-95% Et<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CN, b20 86-9°. If the heating is done in sealed tubes 6-8 hrs. no yellow color is formed and the yield is nearly 100%; the pure product b2 65°, b9 76°, b20 87°, b45 112°, b755 197.3° (corr.), d<sub>20</sub> 0.8761, nD<sub>20</sub> 1.4380; HCl salt, m. 120°; picrate, m. 85°. This (3.1 g.) refluxed 4 hrs. with 4 g. 25% NaOH and evaporated gave the amorphous Na salt of the corresponding acid; refluxing 6.3 g. of the nitrile with 11 g. concentrated HCl, cooling, filtering, and evaporating repeatedly in vacuo gave an amorphous mass, which was freed in aqueous solution of Cl ion by Ag<sub>2</sub>CO<sub>3</sub>, the Ag ion removed with H<sub>2</sub>S, and the filtrate evaporated, yielding 60% Et<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CO<sub>2</sub>H, m. 70-5°. The best reaction conditions for piperidine and I are as follows: Piperidine (17 g.) and 11.1 g. I mixed with cooling in an ampul (cooled until the heat evolution stopped in 15-20 min.) and heated 4 hrs. on a steam bath, then let stand overnight, gave 96-7% (CH<sub>2</sub>)<sub>5</sub>NCH<sub>2</sub>CH<sub>2</sub>CN, b18

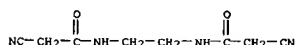
L18 ANSWER 94 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
heated in an oil bath at 140-50°, cooled after 35-40 min., dild. with 130-50 ml. cold H<sub>2</sub>O, steam-distd. 4-6 hrs. into the calcd. amt. of aq. HCl, and the distillate evapd., yielding 81% CH<sub>2</sub>(CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub>.2HCl, m. 242° (from EtOH). Similar reduction of Me<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CN gave 52-6% Me<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, b128-30 70-80° (crude), b20 44-5°, b748 133°, nD<sub>20</sub> 1.4415, d<sub>20</sub> 0.8272; di-HCl salt, m. 184° (from MeOH); picrate, C<sub>17</sub>H<sub>20</sub>N<sub>8</sub>O<sub>14</sub>, m. 211° (from H<sub>2</sub>O). The higher-boiling material yielded a little 3,3'-bis(dimethylamino)dipropylamine, b20 128-31°, nD<sub>20</sub> 1.4531 (HCl salt, hygroscopic solid; tripicrate, m. 200°; chloroplatinate, C<sub>21</sub>H<sub>28</sub>N<sub>4</sub>O<sub>12</sub>, sol. in H<sub>2</sub>O, insol. in aq. EtOH). Reduction of Et<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CN with NaBuOH gave 38-63% diamine; a 2% K-Na alloy gave good consistent 60-70% yields; pure Et<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, b12 61-2°, b70 85-7°, b80 99-100°, b755 168-70°, nD<sub>20</sub> 1.4435, gave 2 active H with Me<sub>2</sub>Nl at room temp. and at 100°; picrate, m. 190.5° (from MeOH); Bz deriv., b11. Refluxing this amine with an equimolar amt. of oleic acid 2 hrs., adding a little amine, heating another hr., concg., and evapg. with C<sub>6</sub>H<sub>6</sub> gave a product that formed extremely stable org.-aq. emulsions. The higher-boiling fractions from the above reduction gave a little bis(diethylamino) dipropylamine, b12 148-50° (picrate, m. 152°), also obtained if the reduction is run with pure Na. Reduction of (CH<sub>2</sub>)<sub>5</sub>NCH<sub>2</sub>CH<sub>2</sub>CN with 2% K-Na in BuOH gave 57% 1-(3-aminopropyl)piperidine, b4 65-6°, b9 79-81°, nD<sub>20</sub> 1.4729. COCl<sub>2</sub> with ROH gave the ClCO<sub>2</sub>R: R = Et, b752 92-4°; Pr, b742 114-16°, nD<sub>20</sub> 1.4036; iso-Pr, b745 101-2°, nD<sub>20</sub> 1.3996, d<sub>20</sub> 1.0777; Bu, b16 40-7°, b756 138°, nD<sub>20</sub> 1.4128, d<sub>20</sub> 1.0513. COCl<sub>2</sub> with ROH in MePh in the presence of 5-8% quinoline gave the following ClCO<sub>2</sub>R: iso-Bu, b750 123-7°; iso-Am, b754 150-1°, nD<sub>20</sub> 1.4176, d<sub>20</sub> 1.0490; C<sub>8</sub>H<sub>17</sub>, b5 86.5°, b10 96-7°, b15 107°, nD<sub>20</sub> 1.4330, d<sub>20</sub> 0.9841; cyclohexyl, b25 80-5°, nD<sub>20</sub> 1.4628; 1-menthyl, b5 96°, b11 108-9°, nD<sub>20</sub> 1.4712; PhCH<sub>2</sub>, b7 85-7°, with an equimolar amt. of quinoline were obtained: sec-Bu, 72%, b23 30-1°, b748 121-4°, nD<sub>20</sub> 1.4490; 1-methyl-2-cyclohexyl, b30 101.5°, nD<sub>20</sub> 1.4560; Ph, b7 64°, nD<sub>20</sub> 1.5162. The diamines (0.025 mole) in Et<sub>2</sub>O were treated with 0.025 mole powd. potash, then 1.5-2 ml. H<sub>2</sub>O, and RO<sub>2</sub>CCl in Et<sub>2</sub>O was added with cooling; the usual treatment gave the desired urethan derivs.: Me<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NHCO<sub>2</sub>Et, 55.8%, b16 137-7°, nD<sub>20</sub> 1.4480, d<sub>20</sub> 0.9653; 1-menthyl ester, 51.8%, b1 164.5°, nD<sub>20</sub> 1.4706, d<sub>20</sub> 0.9557, m. 45°, Et<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NHCO<sub>2</sub>Et, 66.7%, b7 130°, nD<sub>20</sub> 1.4503; iso-Pr ester, 53.2%, b1.5 122-3°, nD<sub>20</sub> 1.4452, d<sub>20</sub> 1.4493, d<sub>20</sub> 0.9367; sec-Bu ester, 42.5%, b5 132°, nD<sub>20</sub> 1.4513, d<sub>20</sub> 0.9334; C<sub>8</sub>H<sub>17</sub> ester, 63.3%, b2 181.5-2°, nD<sub>20</sub> 1.4528, d<sub>20</sub> 1.4577, d<sub>20</sub> 0.9168; cyclohexyl ester, 46.3%, b1.5 165-7°, nD<sub>20</sub> 1.4725, nD<sub>20</sub> 1.4752, d<sub>20</sub> 0.9765; 2-methylcyclohexyl ester, 81.5%, b2 177°, nD<sub>20</sub> 1.4693, nD<sub>20</sub> 1.4723, d<sub>20</sub> 0.9679; 1-menthyl ester, 88.2%, b3 173°, nD<sub>20</sub> 1.4719, d<sub>20</sub> 0.9482, m. 31°; Ph ester, 33.6%, b3 196-201°, nD<sub>20</sub> 1.4770; PhCH<sub>2</sub> ester, 24%, b3 132-5°, nD<sub>20</sub> 1.5030. C<sub>5</sub>H<sub>5</sub>NCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NHCO<sub>2</sub>Et, 78.3%, b9 150-3°, nD<sub>20</sub> 1.4742, d<sub>20</sub> 1.0070; Pr ester, 70.4%, b18 187-8°, nD<sub>20</sub> 1.4735, d<sub>20</sub> 0.9935; iso-Pr ester, 62.8%, b8 155-8°, nD<sub>20</sub> 1.4706, d<sub>20</sub> 0.9878; Bu ester, 62.8%, b3 146°, b5 167-8°, nD<sub>20</sub> 1.4730, d<sub>20</sub> 0.9788; iso-Bu ester, 53.5%, b2 136.5-7°, nD<sub>20</sub> 1.4710, d<sub>20</sub> 0.9813; iso-Am ester, 66.2%, b2 159.5°, nD<sub>20</sub> 1.4712, d<sub>20</sub> 0.9749; C<sub>8</sub>H<sub>17</sub> ester, 63.7%, b9 212-13°, nD<sub>20</sub> 1.4720, d<sub>20</sub> 0.9550.  
ACCESSION NUMBER: 1953:8849 CAPLUS  
DOCUMENT NUMBER: 47:58498  
ORIGINAL REFERENCE NO.: 47:99051, 9906a-1, 9907a-1, 9908a-b

L18 ANSWER 94 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)  
 TITLE: Acrylonitrile as a starting material for synthesis of  
 amino nitriles and polyamines  
 AUTHOR(S): Kost, A. N.  
 SOURCE: Uchenye Zapiski Moskov. Gosudarst. Univ. im. M. V.  
 Lomonosova (1950), (No. 131), 39-97  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 IT 3217-00-3, Propionitrile, 3,3'-(ethylenediimino)di-  
 (and derivs.)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



L18 ANSWER 95 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN (Continued)  
 stirred 30 min., filtered the next day, and the filtrate evapd. under  
 reduced pressure, giving XV, prisms, m. 150-9° (from EtOH). XV is  
 not stable and turns red-brown in air. Titration with EtOH and  
 filtration of the compact mass resulting from the treatment of 23 g.  
 NCCH2CO2Et with 6 g. IV yielded 18 g.  
 N,N'-bis(cyanoacetyl)ethylenediamine  
 m. 192-3° (from EtOH). Recrystn. from PROH (contg. charcoal) of  
 the melt resulting from heating (200°, 3 hrs., oil bath)  
 NC(CH2)2CO2Et and ethylenediamine p-toluenesulfonate gave an unidentified  
 product, white needles, m. 241-2°. o-C6H4(CO)2NCH2CH2CN  
 (17 g.) in 50 ml. dry CHCl3 and 3 ml. EtOH was satd. with dry HCl at  
 0°, the mixt. allowed to stand 10 days, and the solvents distd.  
 off; the crystals of XII soften 95-100° (slow heating), resolidify  
 and finally m. 250°. An attempt to prep. N-substituted derivs. of  
 I by the Mannich reaction between 1-benzyllysine and piperidine or  
 Et2NH  
 (as HCl salts) and HCHO was unsuccessful. The acid succinate (XVIII)  
 deriv. of lysidine, m. 182-3° (from EtOH). A suspension of XVI (15  
 g.) in 50 ml. EtOH was treated with 200 ml. 8% alc. NH3 (shaking, 30  
 min.), and the soln. concd. after several hrs., yielding 5.5 g.  
 α-(carbamylamidocarboxy)acetamidine-HCl (XIX), m. 176-7°  
 (from aq. EtOH). The XIX prep. above differs in behavior upon heating  
 from the XIX prep. by Pinner (Ber. 28, I, 479 (1895)).

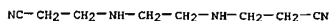
ACCESSION NUMBER: 1951:55678 CAPLUS  
 DOCUMENT NUMBER: 45:55678  
 ORIGINAL REFERENCE NO.: 45:9534g-i, 9535a-f  
 TITLE: Synthesis of a new histamine analog,  
 2-(2-aminoethyl)dihydroglyoxaline  
 AUTHOR(S): Jilek, J. O.; Protiva, M.  
 CORPORATE SOURCE: United Pharm. Works, Prague  
 SOURCE: Collection of Czechoslovak Chemical Communications  
 (1950), 15, 659-70  
 CODEN: CCCCCK; ISSN: 0010-0765  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 IT 3216-88-4, Acetamide, N,N'-ethylenebis(2-cyano-  
 (preparation of)  
 RN 3216-88-4 CAPLUS  
 CN Acetamide, N,N'-1,2-ethanediyldiis(2-cyano- (9CI) (CA INDEX NAME)



L18 ANSWER 95 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB 2-(2-Aminoethyl)-4,5-dihydroglyoxaline (I) possesses no marked histaminic  
 or antihistaminic activity. Since I contains the structural fragment  
 -N-CX.NRR' (Ia) (M. Protiva, Cas. opis cesk. acte. eho  
 l. acte. ek. acte. arnictva 62, 143 (1949)) necessary for histaminic activity  
 (X = Et, Pr, or iso-Pr, R and R' = H or Me), Ia is not a sufficient  
 condition for histaminic activity. All reported m.ps. are corrected and  
 analytical samples were dried 10 hrs. at 0.2 mm. over P2O5.  
 2-(2-Benzamidoethyl)-4,5-dihydroglyoxaline (II) was prepared by 2  
 methods:  
 (1), B2NHCH2CH2C(OEt):NH.HCl (III) (43 g.) in 250 ml. EtOH was refluxed  
 (water bath) 6 hrs. with 10 g. (CH2NH2)2 (IV), (CH2NH2)2.2HCl (V)  
 filtered  
 off, the filtrate concentrated to 0.5 volume, the residue treated with  
 picric acid  
 (VII) (30 g.) in warm EtOH, and allowed to stand in the cold; the picrate  
 (VII) of II, filtered off and recrystd. from 700 ml. EtOH and 400 ml.  
 Me2CO, m. 200-2.5°. VII (41 g.) was decomposed with 400 ml. 3 N HCl,  
 the liberated VI taken up in PhNO2 (VIII), the VI and VIII removed by  
 extraction with Et2O, the remaining acid solution refluxed 4 hrs., the  
 EtOH (IX)  
 filtered off, the filtrate evaporated to dryness, and the residue  
 crystallized from  
 EtOH to yield a mixture (X) of di-HCl salts of I and V. X could not be  
 resolved by crystallization from 90% EtOH, therefore 6.5 g. was allowed  
 to stand 4  
 days (occasional stirring) in 100 ml. NaOEt solution (1.7 g. Na), the  
 NaCl  
 filtered off, the filtrate to dryness, evaporated, and the residue  
 distilled in a  
 Hickman flask; the fraction b0.5 115-120° (crystallized in the receiver)  
 was I, hygroscopic, m. 66-8° (deliquescent in air). Derivs. of I:  
 di-HCl salt, m. 219-21° (from aqueous EtOH); dipicrate, m.  
 193-5° (from water). Preparation (2) (on a larger scale): III, EtOH,  
 and IV were refluxed 1 hr. (water bath), the V filtered off, the filtrate  
 refluxed an addnl. 6 hrs., more V filtered off, the filtrate  
 concentrated under  
 reduced pressure (water bath), the residue taken up in 3 N HCl, the  
 solution  
 refluxed 3 hrs., the IX filtered off, the filtrate evaporated to dryness  
 under  
 reduced pressure, the residue digested in hot EtOH, and the product which  
 separated collected and dried; preparation (2) now continued like (1).  
 Another  
 method of preparing I by adding IV to o-C6H4(CO)2NCH2CH2C(OEt):NH.HCl  
 (XII) in EtOH and refluxing the mixture yielded 1,2-dipthalimidoethane.  
 To  
 prepare N-(2-aminoethyl)-4,5-dihydro-2-glyoxalineacetamide (XIII), 10.6  
 g.  
 EtO2CCH2C(OEt):NH.HCl, 6.7 g. IV, and 60 ml. EtOH were refluxed 8 hrs.  
 (water bath), and the mixture allowed to stand 48 hrs.; the di-HCl salt  
 (XIV) of XIII crystallized, and addnl. XIV was obtained by addition of 2  
 g. HCl in  
 EtO2 to the mother liquor. XIV m. 193-4° (from EtOH). To prepare  
 4,5-dihydro-2-glyoxalineacetamide (XV), 30 g. H2NCOCH2C(OEt):NH.HCl  
 (XVI),  
 18 g. IV, and 250 ml. EtOH were refluxed 4 hrs., to give, on cooling, 25  
 g. HCl salt (XVII) of XV, needles, m. 218° (decomposition, from 75%  
 EtOH). A solution of 20 g. XVII in 250 ml. NaOEt (containing 2.8 g. Na)  
 was

L18 ANSWER 96 OF 101 CAPLUS COPYRIGHT 2004 ACS ON STN  
 AB Comps. [HO2C(CH2)2NRCH2]2 (I) were prepared and their ability to form  
 complexes with Ca++ and Cu++ studied. The I were made from (RNHCH2)2  
 (II)  
 either by reaction with MeCH2CN (III) and acid saponification of the  
 resulting  
 dinitriles [NC(CH2)2NRCH2]2 (IV), or by reaction with Cl(CH2)2CO2Na (V);  
 the latter method was less favorable, and unsuccessful with II where R =  
 C8H17 and Cl2H25. III (2 mols) added dropwise to anhydrous II, (R = H),  
 gave  
 57% IV, (R = H), b20 150-5°, which with 12 N HCl gave 40% of the  
 I.2HCl (R = H), m. 194-8° (decomposition). II (R = H) added dropwise to  
 5 mols III gave 51% IV (R = (CH2)2CN), b1-2 176-9°, saponified with 12  
 N HCl to 69% I (R = (CH2)2CO2H), m. 220-5° (decomposition), also  
 obtained in 12% yield from II (R = H) and 6 mols V. Other IV were  
 prepared  
 from II with excess III at 80°: R = C4H9, 58%, b3 146-9°;  
 PhCH2, 15%, b3 204-7°; C8H17, 40%, b3, 192-4°; C6H11, 70%,  
 m. 91.5-92°. Several of those comps. were not quite pure.  
 Refluxing IV with 12 N HCl gave the acids I; only the IV with R = C8H17  
 yielded 80% II (R = C8H17), and no I. I (R = C4H9) 25%, m. 143-6°  
 (decomposition) (isolated via the Cu++ salt); C6H11, 18.5%, m. 191-200°  
 (decomposition); PhCH2, 22%, m. 147-53° (decomposition). The same  
 comps.  
 were obtained from II and V in 13, 24, and 8% yields, resp. I do not  
 form  
 Ca++ complexes: with the exception of I with R = C6H11, they form Cu++  
 complexes which absorb strongly at 260 mμ. Many titration and  
 absorption curves are given.

ACCESSION NUMBER: 1951:44222 CAPLUS  
 DOCUMENT NUMBER: 45:44222  
 ORIGINAL REFERENCE NO.: 45:75271, 7528a-c  
 TITLE: The preparation and properties of some  
 N,N'-disubstituted ethylenediaminedipropionic acids  
 AUTHOR(S): Martell, Arthur E.; Chaberek, Stanley, Jr.  
 CORPORATE SOURCE: Clark Univ., Worcester, MA  
 SOURCE: Journal of the American Chemical Society (1950), 72,  
 5357-61  
 CODEN: JACSAT; ISSN: 0002-7863  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Unavailable  
 IT 3217-00-3, Propionitrile, 3,3'-(ethylenediimino)di-  
 (preparation of)  
 RN 3217-00-3 CAPLUS  
 CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)



L18 ANSWER 97 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB D-Mannitol hexanitrate (1 g.) in 25 ml. Ac2O-100% H2SO4 (10:1 by volume)  
at 0°, kept 24 hrs. in an ice-salt bath, poured into 400 g. ice and  
H2O, and extracted with five 40-ml. portions of CHCl3, gives 87%  
D-mannitol  
hexaacetate. Acetates were similarly prepared from nitrates of  
cellobiose  
(83%), D-glucose (85%), levoglucosan (72%), erythritol (88%), and  
pentaerythritol (92%).  
ACCESSION NUMBER: 1951:32522 CAPLUS  
DOCUMENT NUMBER: 45:32522  
ORIGINAL REFERENCE NO.: 45:5622f-h  
TITLE: Simple acetylation of nitrate esters  
AUTHOR(S): Wolfrom, M. L.; Bower, R. S.; Maher, G. G.  
CORPORATE SOURCE: Ohio State Univ., Columbus  
SOURCE: Journal of the American Chemical Society (1951), 73,  
874-5  
CODEN: JACSAT; ISSN: 0002-7863  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
IT 3217-00-3, Propionitrile, 3,3'-(ethylenediimino)di-  
(and salts)  
RN 3217-00-3 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediyl-diimino)bis- (9CI) (CA INDEX NAME)

NC-CH2-CH2-NH-CH2-CH2-NH-CH2-CH2-CN

L18 ANSWER 98 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Cf. C.A. 42, 7297f; 44, 9349f. Addition of 35 g. dry CH2:CHCN with  
stirring  
and good cooling to 20 g. dry (CH2NH2)2 in 50 ml. Et2O at 15-20° (2  
hrs.), stirring 2 hrs., and letting stand overnight in a closed vessel  
gave 15 g. (39.8%) H2N(CH2)2NH(CH2)2CN, b1.5 101°, d204 0.9912,  
n20D 1.4727, and 33.1 g. (59.8%) (CH2NHCH2CH2CN)2, b1.5 174°, b3.5  
191°, d204 1.0256, n20D 1.4793. The former yields an oily picrate  
and mono-Bz derivative, while its HCl salt is a very hygroscopic solid;  
the  
dicyanoethylation product forms an oily picrate and a HCl salt, decompose  
184-7° (from dilute MeOH).  
ACCESSION NUMBER: 1951:32521 CAPLUS  
DOCUMENT NUMBER: 45:32521  
ORIGINAL REFERENCE NO.: 45:5622e-f  
TITLE: Syntheses with acrylonitrile. XI. Cyanoethylation of  
ethylenediamine  
AUTHOR(S): Terent'ev, A. P.; Kost, A. N.  
CORPORATE SOURCE: Moscow State Univ.  
SOURCE: Zhurnal Obshchei Khimii (1950), 20, 2069-71  
CODEN: ZOKHA4; ISSN: 0044-460X  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
IT 3217-00-3, Propionitrile, 3,3'-(ethylenediimino)di-  
(and salts)  
RN 3217-00-3 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediyl-diimino)bis- (9CI) (CA INDEX NAME)

NC-CH2-CH2-NH-CH2-CH2-NH-CH2-CH2-CN

L18 ANSWER 99 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Primary amines and CH2:CHCN are caused to react to give RNHCH2CH2CN, 2  
moles of which are caused to react with CS2 to give a salt, R(NCCH2CH2)  
NCSSHN(CH2CH2CN)R. The nitrile is gradually added to the amine at  
10-15° in a container equipped with a reflux condenser. After  
stirring for a short time at room temperature, CS2 is added, and the H2O  
and  
unreacted CS2 are removed by evaporation; the dithiocarbamic acid salt  
(usually  
a viscous, yellow resin) is left. Comps. were prepared in which R is  
cyclohexyl; Bu; iso-Pr, soft solid; Am; allyl; dodecyl, jelly; Et; and  
benzyl, clear brittle resin. CH2:CHCN 53 and 60% (CH2NH2)2 50 parts,  
kept  
below 60°, give (CH2NHC2H4CN)2 (I), which with CS2 below 50°  
gives a clear resin thought to be NCC2H4N(CS2H) C2H4NHC2H4CN. To I 20.8,  
25% NaOH 40, and H2O 300 parts, is added slowly with cooling 19 parts  
CS2,  
and the solution is stirred until clear. ZnSO4.H2O 22.6, in H2O 400  
parts,  
is slowly added to precipitate white zinc ethylenebis(N-2-  
cyanoethyl)dithiocarbamate). To 215 parts 21% aqueous NCC2H4NBuCS2Na  
(II) at  
10-15° is added a mixture of 26.6% H2O2 16.9, 66 B.acte.e H2SO4 13.1,  
and H2O 125 parts. The sirup is separated from the H2O, washed with H2O,  
taken up in ether, dried, and the ether is evaporated to give 90%  
(NCC2H4NBuCS2)2, viscous sirup. II and ZnSO4 give (NCC2H4NBuCS2)2Zn,  
soft, colorless solid. Similarly prepared were: (NCC2H4NMeCS2)2Zn,  
cream-colored solid; and (NCC2H4N(C6H11)CS2)2Zn, white powder (C6H11 =  
cyclohexyl). C6H11NHC2H4CN, C6H11NMe2, and CS2, in ether at  
20-30°, give NCC2H4N(C6H11) CS2HNMe2C6H11, m. 103-4°. To  
154 parts 31.6% NaCN at 5-10° are added 30% H2SO4 166, BuNH2 73,  
and 36.7% HCHO 81.8 parts. The mixture is heated to 50° for 1 hr.,  
cooled to 10°, and the organic layer is separated, dried, and distilled  
to  
give BuNHC2H2CN, b6 77-80°. From BuNHC2H2CN the salt  
(NCCH2NBuCS2)2Zn, white powder, was prepared. Similarly, NCCH2CHMeNHET  
gives  
(NCCH2CHMeNHETCS2)2Zn, pale yellow powder.  
ACCESSION NUMBER: 1950:59121 CAPLUS  
DOCUMENT NUMBER: 44:59121  
ORIGINAL REFERENCE NO.: 44:11170b-f  
TITLE: N-(Cyanoalkyl)dithiocarbamic acids and derivatives  
PATENT ASSIGNEE(S): Monsanto Chemical Co.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 640158		19500712	GB	
IT 3217-00-3, Propionitrile, 3,3'-(ethylenediimino)di- (preparation of)				
RN 3217-00-3 CAPLUS				
CN Propanenitrile, 3,3'-(1,2-ethanediyl-diimino)bis- (9CI) (CA INDEX NAME)				

NC-CH2-CH2-NH-CH2-CH2-NH-CH2-CH2-CN

L18 ANSWER 99 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)

L18 ANSWER 100 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB (NCCHCHRRNH)2A (I), where R is any radical which does not react with an  
amine and A is a divalent radical, are prepared in at least 80% yield  
from 2  
moles of an  $\alpha,\beta$ -unsatd. nitrile and 1 mole of a diamine. I may  
be reduced to the corresponding tetramine or hydrolyzed to the  
corresponding dicarboxylic acid. Thus, from CH<sub>2</sub>:CHCN 12 added slowly to  
(CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub> 120 and water 100 parts, the mixture allowed to stand 2 hrs.,  
heated 15 min. to 100°, and the water distilled off under reduced  
pressure, 1 (R = H, A = CH<sub>2</sub>CH<sub>2</sub>) (II), b.p. 186-92°, nd<sub>20</sub> 1.478, was  
obtained in 93% yield. Crude II in 1000 parts 95% alc. saturated with  
NH<sub>3</sub> at  
0°, hydrogenated at 1600 lb./sq. in. initial H pressure at  
100° in the presence of 80 parts Raney Ni, gave (CH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>)<sub>2</sub>,  
which forms a hygroscopic hydrate, m. 45-7°, and a tetra-Bz derivative,  
m. 200°. Similarly were obtained 1 (R = H, A = (CH<sub>2</sub>)<sub>6</sub>), b<sub>2</sub>  
230-8°, H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>NH(CH<sub>2</sub>)<sub>6</sub>NHCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub>, and p-C<sub>6</sub>H<sub>4</sub>(NHCH<sub>2</sub>CH<sub>2</sub>CN)<sub>2</sub>, m.  
140° (from alc.).

ACCESSION NUMBER: 1949:29537 CAPLUS  
DOCUMENT NUMBER: 43:29537  
ORIGINAL REFERENCE NO.: 43:5414d-g  
TITLE:  $\beta,\beta'$ -(Alkylenediimino)dipropionitrile and  
derivatives thereof  
INVENTOR(S): Lincoln, James; Ellis, Bernard; Richardson, George G.  
DOCUMENT TYPE: Patent  
LANGUAGE: Unavailable  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	GB 613807		19481203	GB	
IT	3217-00-3				
RN	3217-00-3				
CN	Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI)				(CA INDEX NAME)

NC-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-CN

L18 ANSWER 101 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Dissertation summary. CH<sub>2</sub>:CHCN (I) was condensed with amines to  
 $\beta$ -amino nitriles which were hydrolyzed to the acids for phytohormone  
studies; the nitriles were also condensed with RX to quaternary N compds.  
for bactericidal studies; the aromatic derivs. were coupled with  
diazonium  
compds. to new dyes. Reduction methods were studied to give diamine  
derivs. Aliphatic amines add to I in quant. yield with exothermal  
reaction; PhNH<sub>2</sub> required the following method for 70% yield: the  
reagents

are heated 100 hrs. in a sealed tube to 100° in the presence of  
Ac<sub>2</sub>O and a little hydroquinone. Hydrolyses were done at reflux in dilute  
alc. KOH. Reductions were done with Na-K alloy in BuOH. The diamine  
urethans were made using esters of ClCO<sub>2</sub>H in moist Et<sub>2</sub>O in the presence  
of  
K<sub>2</sub>CO<sub>3</sub>. The exptl. work was done in 1938-41, thus anticipating Whitmore,  
et al. (C.A. 38, 3617.3). The compds. made were: H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CN (34-6%),

b23  
89°, nd<sub>20</sub> 1.4390, d<sub>420</sub> 0.9584; HN(CH<sub>2</sub>CH<sub>2</sub>CN)<sub>2</sub> (57-60%), b<sub>14</sub>  
177-9°, nd<sub>20</sub> 1.4610, d<sub>420</sub> 1.0196 (Ac derivative, m. 146°; Bz  
derivative, m. 112°; picrate, oil); Me<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CN (80-1%), b<sub>750</sub>  
171°, nd<sub>20</sub> 1.428, d<sub>420</sub> 0.8703 (picrate, m. 151°; HCl salt,  
m. 199°; methiodide, m. 153°; ethiodide, m. 128.5°;  
ethobromide, m. 157°; propobromide, m. 189°; allochloride,  
m. 185-7°); Et<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CN (96-8%), b<sub>2</sub> 65°, b<sub>9</sub> 76°, b<sub>20</sub>  
87°, b<sub>755</sub> 197.3°, nd<sub>20</sub> 1.4380, d<sub>420</sub> 0.8761 (picrate, m.  
85°; HCl salt, m. 120°; methiodide, m. 152°;  
ethiodide, m. 168°); 2-(1-piperidyl)-1-cyanoethane (96-7%), b<sub>18</sub>  
114-15° (methiodide, m. 152°; ethiodide, m. 160-1°);  
N-ethyl-N-(2-cyanoethyl)aniline (70%), b<sub>8</sub> 158°, nd<sub>20</sub> 1.5503, d<sub>420</sub>  
1.0260 (picrate and styphnate, oils; amide, prepared after hydrolysis, m.  
67°); H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>CN (39.8%), b<sub>1.5</sub> 101°, nd<sub>20</sub> 1.4727,  
d<sub>420</sub> 0.9912; (CH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub>CN)<sub>2</sub> (59%), b<sub>1.5</sub> 174°, nd<sub>20</sub> 1.4792, d<sub>420</sub>  
1.0256 (HCl salt, m. 184-7° (decomposition)); H<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub> (81%),  
isolated as the HCl salt, m. 242°); Me<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub> (52-6%), b<sub>748</sub>  
133°, nd<sub>20</sub> 1.4415, d<sub>420</sub> 0.8272 (HCl salt, m. 184°; picrate,  
m. 211°); HN(CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NMe<sub>2</sub>)<sub>2</sub>, b<sub>20</sub> 128-31°, nd<sub>20</sub> 1.4531  
(picrate, m. 200°); Et<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub> (60-70%), b<sub>90</sub> 99-100°,  
nd<sub>20</sub> 1.4425 (picrate, m. 190.5°; Bz derivative, oil);  
HN(CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NEt<sub>2</sub>)<sub>2</sub>, b<sub>12</sub> 148-50° (picrate, m. 152°);  
1(3-aminopropyl)piperidine (57%), b<sub>9</sub> 79-81°, nd<sub>20</sub> 1.4729.  
R<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NHCO<sub>2</sub>R' (R and R' given): Me, Et, b<sub>6</sub> 137-8°, nd<sub>20</sub>  
1.4480, d<sub>420</sub> 0.9653; Me, 1-menthyl, b<sub>11</sub> 164.5°, nd<sub>20</sub> 1.4706, d<sub>420</sub>  
0.9557. Et<sub>2</sub>NCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NHCO<sub>2</sub>R' (R given): Et, b<sub>7</sub> 130°, nd<sub>20</sub> 1.4503;  
iso-Pr, b<sub>1.5</sub> 122-3°, nd<sub>20</sub> 1.4493, d<sub>420</sub> 0.9367; sec-Bu, b<sub>5</sub>  
132°, nd<sub>20</sub> 1.4513, d<sub>420</sub> 0.9334; C<sub>8</sub>H<sub>17</sub>, b<sub>2</sub> 181.5-2°, nd<sub>20</sub>  
1.4577, d<sub>420</sub> 0.9168; cyclohexyl, b<sub>1.5</sub> 165-7°, nd<sub>20</sub> 1.4752, d<sub>420</sub>  
0.9765; 1-methylcyclohexyl, b<sub>2</sub> 177°, nd<sub>20</sub> 1.4723, d<sub>420</sub> 0.9679;  
1-menthyl, b<sub>3</sub> 173°, m. 31°, nd<sub>20</sub> 1.4719, d<sub>420</sub> 0.9482;  
benzyl, b<sub>3</sub> 132-5°, nd<sub>20</sub> 1.5030; Ph, b<sub>3</sub> 196-201°, nd<sub>20</sub>  
1.4770. (CH<sub>2</sub>)<sub>5</sub>NCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>NHCO<sub>2</sub>R: Et, b<sub>9</sub> 150-3°, nd<sub>20</sub> 1.4742, d<sub>520</sub>  
1.0070; Pr, b<sub>18</sub> 187-8°, nd<sub>20</sub> 1.4735, d<sub>420</sub> 0.9935; iso-Pr, b<sub>8</sub>  
155-8°, nd<sub>20</sub> 1.4706, d<sub>420</sub> 0.9878; Bu, b<sub>3</sub> 146°, nd<sub>20</sub> 1.4730,  
d<sub>420</sub> 0.9788; iso-Bu, b<sub>2</sub> 136.5-7°, nd<sub>20</sub> 1.4710, d<sub>420</sub> 0.9813; iso-Am,  
b<sub>2</sub> 159.5°, nd<sub>20</sub> 1.4712, d<sub>420</sub> 0.9749; C<sub>8</sub>H<sub>17</sub>, b<sub>9</sub> 212-13°, nd<sub>20</sub>  
1.4720, d<sub>420</sub> 0.9550.

ACCESSION NUMBER: 1948:17366 CAPLUS  
DOCUMENT NUMBER: 42:17366  
ORIGINAL REFERENCE NO.: 42:3722g-1,3723a-e  
TITLE: Acrylonitrile as source material for the synthesis of

L18 ANSWER 101 OF 101 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
AUTHOR(S): amino nitriles and polyamines  
Kost, A. N.  
SOURCE: Vestnik Moskovskogo Universiteta (1947), No. 2, 141-6  
CODEN: VMUNAB; ISSN: 0372-6320  
DOCUMENT TYPE: Journal  
LANGUAGE: Unavailable  
IT 3217-00-3, Propionitrile, 3,3'-(ethylenediimino)di-  
(preparation of)  
RN 3217-00-3 CAPLUS  
CN Propanenitrile, 3,3'-(1,2-ethanediyldiimino)bis- (9CI) (CA INDEX NAME)

NC-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-NH-CH<sub>2</sub>-CH<sub>2</sub>-CN

=> fil reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

484.71

1734.03

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-70.70

-160.30

FILE 'REGISTRY' ENTERED AT 18:57:04 ON 30 SEP 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 29 SEP 2004 HIGHEST RN 754169-63-6

DICTIONARY FILE UPDATES: 29 SEP 2004 HIGHEST RN 754169-63-6

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

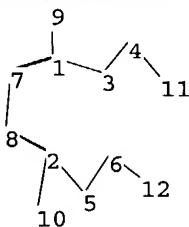
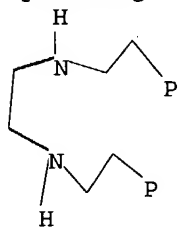
Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=>

Uploading C:\Program Files\Stnexp\Queries\10643855.str



chain nodes :

1 2 3 4 5 6 7 8 9 10 11 12

chain bonds :

1-3 1-7 1-9 2-5 2-8 2-10 3-4 4-11 5-6 6-12 7-8

exact/norm bonds :

1-3 1-7 2-5 2-8

exact bonds :

1-9 2-10 3-4 4-11 5-6 6-12 7-8

Match level :

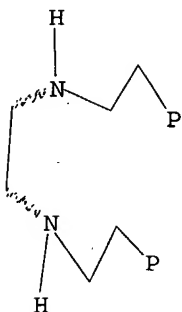
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS 8:CLASS 9:CLASS

10:CLASS 11:CLASS 12:CLASS

L19        STRUCTURE UPLOADED

=> d query

L19                STR



Structure attributes must be viewed using STN Express query preparation.

=> s l19

SAMPLE SEARCH INITIATED 18:57:54 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED -        30 TO ITERATE

100.0% PROCESSED        30 ITERATIONS

2 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:    ONLINE    \*\*COMPLETE\*\*

BATCH    \*\*COMPLETE\*\*

PROJECTED ITERATIONS:        272 TO        928

PROJECTED ANSWERS:            2 TO        124

L20                2 SEA SSS SAM L19

=> s l19 full

FULL SEARCH INITIATED 18:58:01 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED -        612 TO ITERATE

100.0% PROCESSED        612 ITERATIONS

31 ANSWERS

SEARCH TIME: 00.00.01

L21                31 SEA SSS FUL L19

=> fil caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

155.84

1889.87

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

0.00

-160.30

FILE 'CAPLUS' ENTERED AT 18:58:04 ON 30 SEP 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 30 Sep 2004 VOL 141 ISS 14  
FILE LAST UPDATED: 29 Sep 2004 (20040929/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l21

L22 30 L21

=> d l22 1-30 abs ibib hitstr

L22 ANSWER 1 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB R5CH2CH2NHC(R1)R2CR3R4NHC(R5)CH2CH2R6 [R1-R4 = H, alkyl, aryl, aralkyl; R1-R4 =  
 atoms to form a C5-8 cycloalkyl ring; R5, R6 = CO2R7, CONR8R9, cyano,  
 PO(OR10)2; R7-R10 = alkyl, aryl, aralkyl; NR8R9 = cyclic amino;  
 stereogenic atoms may be R or S; with the exception of meso compds.],  
 were

prepared Thus, (1S,2S)-diphenylethylenediamine in ethanol was treated  
 with acrylonitrile and the mixture was stirred 72 h at room temperature to  
 give  
 (1S,2S)-bis[N-(2-cyanoethyl)amino]-1,2-diphenylethane in 99% purity.  
 This

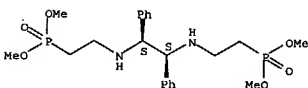
was used with Et2Zn and polymethylhydrosiloxane for asym. reduction of  
 propiophenone, isobutyrophenone, 2-methylacetophenone, and  
 2-bromoacetophenone.

ACCESSION NUMBER: 2004:157496 CAPLUS  
 DOCUMENT NUMBER: 140:217374  
 TITLE: Preparation of optically active 1,2-diaminoalkanes  
 and their use in catalytic processes  
 INVENTOR(S): Koecher, Juergen  
 PATENT ASSIGNEE(S): Bayer Chemicals AG, Germany  
 SOURCE: Eur. Pat. Appl., 16 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1391448	A1	20040225	EP 2003-18220	20030811
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
DE 10238114	A1	20040304	DE 2002-10238114	20020821
US 2004044238	A1	20040304	US 2003-643855	20030819
PRIORITY APPLN. INFO.:			DE 2002-10238114	A 20020821

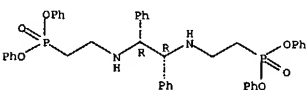
OTHER SOURCE(S): CASREACT 140:217374; MARPAT 140:217374  
 IT 663931-90-6P 663931-91-7P 663931-92-8P  
 663931-93-9P 663931-94-0P 663931-95-1P  
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);  
 USES (Uses)  
 (preparation of optically active 1,2-diaminoalkanes and their use in  
 catalytic processes)  
 RN 663931-90-6 CAPLUS  
 CN Phosphonic acid, [(1S,2S)-1,2-diphenyl-1,2-ethanediyl]bis(imino-2,1-  
 ethanediyl)bis-, tetramethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 663931-91-7 CAPLUS

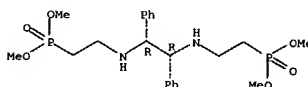
L22 ANSWER 1 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 Absolute stereochemistry.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

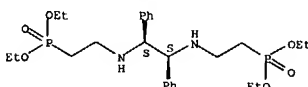
L22 ANSWER 1 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
 CN Phosphonic acid, [(1R,2R)-1,2-diphenyl-1,2-ethanediyl]bis(imino-2,1-  
 ethanediyl)bis-, tetramethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



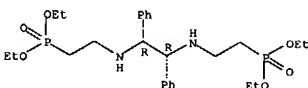
RN 663931-92-8 CAPLUS  
 CN Phosphonic acid, [(1S,2S)-1,2-diphenyl-1,2-ethanediyl]bis(imino-2,1-  
 ethanediyl)bis-, tetraethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



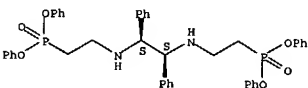
RN 663931-93-9 CAPLUS  
 CN Phosphonic acid, [(1R,2R)-1,2-diphenyl-1,2-ethanediyl]bis(imino-2,1-  
 ethanediyl)bis-, tetraethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 663931-94-0 CAPLUS  
 CN Phosphonic acid, [(1S,2S)-1,2-diphenyl-1,2-ethanediyl]bis(imino-2,1-  
 ethanediyl)bis-, tetraphenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

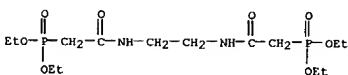


RN 663931-95-1 CAPLUS  
 CN Phosphonic acid, [(1R,2R)-1,2-diphenyl-1,2-ethanediyl]bis(imino-2,1-  
 ethanediyl)bis-, tetraphenyl ester (9CI) (CA INDEX NAME)

L22 ANSWER 2 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Sym. α,ω-alkanediyl bridged bis-2-phosphonoacetamides and  
 bis-2-phosphonoacetates were prepared by Michaelis-Arbuzov,  
 Michaelis-Becker  
 and transesterification reactions in high yields. All bisphosphonates  
 synthesized were characterized by IR, 1H-NMR, 13C-NMR, 31P-NMR, and mass  
 spectroscopy.

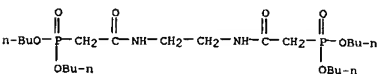
ACCESSION NUMBER: 2002:623637 CAPLUS  
 DOCUMENT NUMBER: 138:56016  
 TITLE: Synthesis and characterization of new symmetrical  
 bisphosphonates  
 AUTHOR(S): Rodrigues, Janaina Marques; DaCosta, Joao Batista  
 Neves  
 CORPORATE SOURCE: Departamento de Quimica, ICE, Universidade Federal  
 Rural do Rio de Janeiro, Rio de Janeiro, 23851-970,  
 Brazil  
 SOURCE: Phosphorus, Sulfur and Silicon and the Related  
 Elements (2002), 177(1), 137-149  
 CODEN: PSSLEC; ISSN: 1042-6307  
 PUBLISHER: Taylor & Francis Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 138:56016  
 IT 479401-06-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (Preparation of sym. α,ω-alkanediyl bridged bis-2-  
 phosphonoacetamides by Michaelis-Arbuzov reaction)

RN 479401-06-4 CAPLUS  
 CN Phosphonic acid, [1,2-ethanediylbis(imino(2-oxo-2,1-ethanediyl))]bis-,  
 tetraethyl ester (9CI) (CA INDEX NAME)



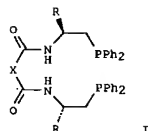
IT 479401-10-0P

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (Preparation of sym. α,ω-alkanediyl bridged bis-2-  
 phosphonoacetamides by Michaelis-Becker reaction)  
 RN 479401-10-0 CAPLUS  
 CN Phosphonic acid, [1,3-propanediylbis(imino(2-oxo-2,1-ethanediyl))]bis-,  
 tetrabutyl ester (9CI) (CA INDEX NAME)



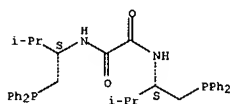
REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT





AB Bridging parts X between two amide skeletons of C2-sym. diphosphine ligands I [R = Me2CH, Me3C, Me; X = m-phenylene, (CH2)3, o-phenylene, CH2CH2, a bond, Me2C, cyclopropylidene, cyclobutylidene] were varied using different diacyl chlorides. The ligand I (R = Me2CH, X = o-phenylene), derived from phthaloyl chloride, which was remarkably effective in the asym. induction on palladium-catalyzed asym. allylic substitutions of 2-cyclohexenyl pivalate or acetate, exhibited a moderate level of enantioselectivity, 72% ee, in the transformations of 1,3-diphenyl-2-propenyl pivalate. The newly developed ligands I (R = Me2CH; X = Me2C, cyclopropylidene, cyclobutylidene), having one carbon spacers X, demonstrated higher degrees of enantiomeric excess up to 93% ee. Interestingly, the present reactions catalyzed by certain Pd-I complexes afforded a product with the opposite absolute configuration S compared with the reactions using VALAP, which has the same chiral source as that of I. Other I induced the R configuration although the yields were very low. The production of S product was discussed on the basis of the Pr/Mr chirality model.

ACCESSION NUMBER: 2000:836434 CAPLUS  
DOCUMENT NUMBER: 134:193179  
TITLE: Induction of reverse chirality by C2-symmetric diamide  
AUTHOR(S): Saichoh, A.; Uda, T.; Morimoto, T.  
CORPORATE SOURCE: School of Pharmaceutical Sciences, University of Shizuoka, Shizuoka-shi, 422-8526, Japan  
SOURCE: Tetrahedron: Asymmetry (2000), 11(20), 4049-4053  
CODEN: TASYE3; ISSN: 0957-4166  
PUBLISHER: Elsevier Science Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 134:193179  
IT 263024-60-8  
RL: CAT (Catalyst use); USES (Uses)  
(induction of reverse chirality by C2-sym. diamide linked-diphosphine ligands in catalytic asym. allylations)  
RN 263024-60-8 CAPLUS  
CN Ethanediamide,  
N,N'-bis[(1S)-1-[(diphenylphosphino)methyl]-2-methylpropyl]-  
(9CI) (CA INDEX NAME)



REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

AB A 3rd generation dendron possessing one activated vinyl group linked to the core and 16 chlorines linked to the surface was functionalized with various groups at the core (primary amine, phosphine, or azide), and on the surface (aldehyde, tertiary amine, or nitrile). These functionalized dendrons are used as building blocks for the synthesis of several complex dendritic architectures, obtained through core-core, core-surface, or core-core-surface-core coupling using very simple 1-step reactions between

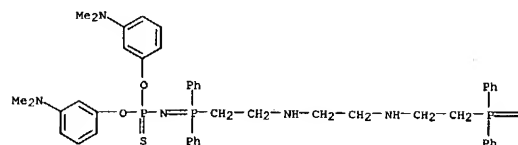
these functions, such as Michael addns. between vinyl and primary amino groups or Staudinger reactions between phosphines and azides.

ACCESSION NUMBER: 2000:145208 CAPLUS  
DOCUMENT NUMBER: 132:294118  
TITLE: Rapid Synthesis of Phosphorus-Containing Dendrimers with Controlled Molecular Architectures: First  
Example of Surface-Block, Layer-Block, and Segment-Block Dendrimers Issued from the Same Dendron  
AUTHOR(S): Maraval, Valerie; Laurent, Regis; Donnadieu, Bruno; Mauzac, Monique; Caminade, Anne-Marie; Majoral, Jean-Pierre  
CORPORATE SOURCE: Laboratoire de Chimie de Coordination, CNRS, Toulouse, 31077, Fr.  
SOURCE: Journal of the American Chemical Society (2000), 122(11), 2499-2511  
CODEN: JACSAT; ISSN: 0002-7863  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English

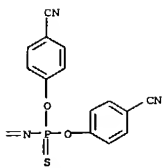
IT 264869-68-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(model compound; rapid synthesis of phosphorus-containing dendrimers)

with controlled mol. architectures of surface-block, layer-block, and segment-block dendrimers from same dendron)

RN 264869-68-3 CAPLUS  
CN Phosphoramidothioic acid, [[2-[[2-[[2-[[bis(4-cyanophenoxy)phosphinothioyl]imino]diphenylphosphoranyl]ethyl]amino]ethyl]amino]ethyl]diphenylphosphoranylidenel-, O,O-bis[3-(dimethylamino)phenyl] ester (9CI) (CA INDEX NAME)



PAGE 1-B



REFERENCE COUNT: 95 THERE ARE 95 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

AB The synthesis of new chiral multidentate amino- and amidophosphine ligands

bearing up to six potential coordination sites were synthesized starting from L-valine. The ligands are: (S)-Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>PrNH<sub>2</sub>, (S,S)-Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>PrNHCH<sub>2</sub>CH<sub>2</sub>NHCH<sub>2</sub>PrCH<sub>2</sub>PPh<sub>2</sub> (and its diamide precursor), and (S,R,R,S)-Ph<sub>2</sub>PCH<sub>2</sub>CH<sub>2</sub>PrNHC(O)CH(OH)CH(OH)C(O)NHCH<sub>2</sub>PrCH<sub>2</sub>PPh<sub>2</sub> (and its isopropylidene- and acetyl-protected precursors). Based on these compds. chiral Ru(II) complexes were prepared, characterized and tested in the

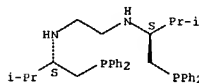
asym. transfer hydrogenation of aryl-alkyl ketones. In all cases studied the catalyst bearing addnl. hydroxy groups gave lower conversions than the complex without hydroxy groups. Highest enantioselectivity was achieved with isobutyrophenone as substrate (69% ee).

ACCESSION NUMBER: 2000:128524 CAPLUS  
 DOCUMENT NUMBER: 132:251186  
 TITLE: Synthesis of heterofunctionalized multidentate diphosphines  
 AUTHOR(S): Quimbach, Michael; Holz, Jens; Tararov, Vitali I.; Borner, Armin  
 CORPORATE SOURCE: Institut für Organische Katalyseforschung an der Universität Rostock e.V., Rostock, D-18055, Germany  
 SOURCE: Tetrahedron (2000), 56(5), 775-780  
 CODEN: TETRA; ISSN: 0040-4020  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 132:251186

IT 263024-61-9P, (S,S)-1,2-Bis[(1-[(diphenylphosphino)methyl]-2-methylpropyl)amino]ethane  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and coordinative substitution with ruthenium chloro DMSO complex)

RN 263024-61-9 CAPLUS  
 CN 1,2-Ethanediamine, N,N'-bis[(1S)-1-[(diphenylphosphino)methyl]-2-methylpropyl]- (9CI) (CA INDEX NAME)

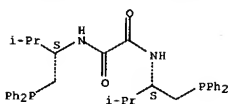
Absolute stereochemistry. Rotation (+).



IT 263024-60-8P, (S,S)-N,N'-Bis[1-[(diphenylphosphino)methyl]-2-methylpropyl]oxalaldiamide  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and reduction by lithium aluminum hydride)

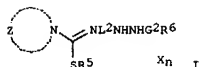
RN 263024-60-8 CAPLUS  
 CN Ethanediamide, N,N'-bis[(1S)-1-[(diphenylphosphino)methyl]-2-methylpropyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE  
 FORMAT

GI

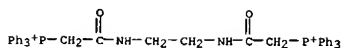


AB The material contains (A) hydrazine derivs. R1R2NC(SR3):NL1(NH)2G1R4 and/or I [L1-2 = divalent connecting group; G1-2 = CO, SO<sub>2</sub>, S(=O), (CO)<sub>2</sub>, phosphoryl; R1-2 = H, alkyl, aralkyl, alkenyl, aryl; R3, R5 = alkyl, aralkyl, alkenyl; R4, R6 = H, alkyl, alkoxy, aryloxy, aryl, amino; Z = atomic group required to form N-containing 5-18-membered ring; isothioureido may be protonic acid salt; m, n = 0, 1] and (B) 21 phosphonium salt (R11R12R13P+)tQ.(t/u)Xu- [R11-13 = (substituted) alkyl, cycloalkyl, aryl, alkenyl, cycloalkenyl, or heterocyclic group; Q = t-valent organic group whose C atom is connecting with P atom; u = 1, 3; X = u-valent anion; X and Q may connect] in 21 emulsion layer and/or 21 hydrophilic colloid layer. The material gives high-contrast images even when processed with a developer of pH <11.

ACCESSION NUMBER: 1997:526283 CAPLUS  
 DOCUMENT NUMBER: 127:240938  
 TITLE: Silver halide photographic material giving high-contrast images for photomechanical process  
 INVENTOR(S): Onishi, Masako; Nishi, Kenichi  
 PATENT ASSIGNEE(S): Mitsubishi Paper Mills, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 16 pp.  
 CODEN: JQXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09203987	A2	19970805	JP 1996-11361	19960126
PRIORITY APPLN. INFO.:			JP 1996-11361	19960126

IT 61214-05-9  
 RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
 (high-contrast silver halide photog. material containing hydrazine derivative and phosphonium salt nucleating activator)  
 RN 61214-05-9 CAPLUS  
 CN 4,7-Diaza-1,10-diphosphonadecane, 3,8-dioxo-1,1,1,10,10,10-hexaphenyl-, dichloride (9CI) (CA INDEX NAME)

● 2 Cl<sup>-</sup>

AB The title image formation uses a photog. material having 1 photosensitive Ag halide emulsion layer containing a hydrazine nucleating agent and an onium

salt as nucleation promoter, and develops the photog. material with an ascorbic acid-based developer solution containing no polyhydroxy benzene developer with pH ≤ 10. The hydrazine nucleating agent has a formula R1-S-L-(J1)n-N(R2)-J2-X-N(A1)-N(A2)-CO-R (R1 = alkyl, alkenyl, alkynyl, aryl, heterocyclyl; R2 = H, alkyl, aryl, heterocyclyl; R = H, block group; L = alkylene, alkenylene; R1-S-L part contains 22 rings; J1, J2 = connecting group; n = 0, 1; X = aromatic group or heterocyclyl residue; A1 and A2 may be H in the same time or 1 is H, the other is acyl, sulfonyl or oxalyl). The preferred nucleation promoter

and developer are also claimed.

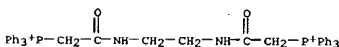
ACCESSION NUMBER: 1997:449357 CAPLUS  
DOCUMENT NUMBER: 127:72942  
TITLE: Photographic image formation  
INVENTOR(S): Sakai, Minoru  
PATENT ASSIGNEE(S): Fujii Photo Film Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 78 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09120120	A2	19970506	JP 1995-299331	19951025
PRIORITY APPLN. INFO.:			JP 1995-299331	19951025

IT 61214-05-9  
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
(nucleation promoter contained in photog. material for image formation)

RN 61214-05-9 CAPLUS

CN 4,7-Diaza-1,10-diphosphoniadecane, 3,8-dioxo-1,1,1,10,10,10-hexaphenyl-, dichloride (9CI) (CA INDEX NAME)

● 2 Cl<sup>-</sup>

AB The title photog. material, having 21 photosensitive emulsion layer, contains 21 compound of A-NHNH-CO-R (R = difluoro Me, monofluoromethyl; A = aromatic group; the A-containing group may be a diffusion-resistant group, a Ag halide adsorbing group, an alkylthio, an arylthio, a quaternary ammonium, a quaternary N-containing heterocyclyl,

an alkoxy containing ethylene oxy or propylene oxy, or a saturated heterocyclyl sulfide or disulfide) and 21 compound selected from amine derivs. and onium salts.

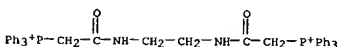
ACCESSION NUMBER: 1997:69455 CAPLUS  
DOCUMENT NUMBER: 126:96805  
TITLE: Silver halide photographic material with super high-contrast  
INVENTOR(S): Sakai, Minoru; Takeuchi, Hiroshi  
PATENT ASSIGNEE(S): Fujii Photo Film Co Ltd, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 84 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08278584	A2	19961022	JP 1995-104647	19950406
JP 3434082	B2	20030804		
PRIORITY APPLN. INFO.:			JP 1995-104647	19950406

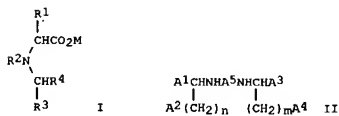
IT 61214-05-9  
RL: DEV (Device component use); USES (Uses)  
(contained in photog. material with super high-contrast)

RN 61214-05-9 CAPLUS

CN 4,7-Diaza-1,10-diphosphoniadecane, 3,8-dioxo-1,1,1,10,10,10-hexaphenyl-, dichloride (9CI) (CA INDEX NAME)

● 2 Cl<sup>-</sup>

GI



AB Electroless metal plating baths comprises metal ion-supplying agents, reductants, and complexing agents containing monoamine type chelating agents I

[R1 = H or Cl-10 hydrocarbon groups optionally having substitution radicals selected from OH, CO2M, SO3M, PO3M2, NH2, CONH2, NHC(=NH)NH2,

and

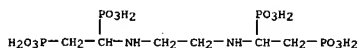
SH; R2, R3 = H or Cl-8 hydrocarbon groups optionally having substitution radicals selected from OH, CO2M, SO3M, and PO3M2; R4 = H, CO2M, SO3M, or PO3M2; M = H or alkali metal] and diamine type chelating agents II (A1, A2, A3, A4 = independently H, CO2M, SO3M, or PO3M2; A5 = Cl-8 alkylene optionally having ether bond, ester bond, and amide bond; n, m = integers of 1-8). The metal in the metal ion-supplying agents is Cu or Ni.

ACCESSION NUMBER: 1997:34044 CAPLUS  
DOCUMENT NUMBER: 126:93170  
TITLE: Electroless metal plating baths using chelating agents  
INVENTOR(S): Yamamoto, Hiroshi; Takayanagi, Yasuyuki; Takano, Osamu  
PATENT ASSIGNEE(S): Nitto Chemical Industry Co., Ltd., Japan; Yamamoto, Hiroshi; Takayanagi, Yasuyuki; Takano, Osamu  
SOURCE: PCT Int. Appl., 27 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9634126	A1	19961031	WO 1996-JP1105	19960424
W: US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,				
SE JP 08296049	A2	19961112	JP 1995-120467	19950424
JP 09013175	A2	19970114	JP 1995-140110	19950516
JP 08325742	A2	19961210	JP 1995-155471	19950531
JP 09049084	A2	19970218	JP 1995-233196	19950821
PRIORITY APPLN. INFO.:			JP 1995-120466	19950424
			JP 1995-120467	19950424
			JP 1995-140110	19950516
			JP 1995-155471	19950531

L22 ANSWER 9 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)  
JP 1995-155472 19950531  
JP 1995-233196 19950821

OTHER SOURCE(S): MARPAT 126:93170  
IT 184953-11-5  
RL: TEM (Technical or engineered material use); USES (Uses)  
(electroless metal coating baths containing chelating agents)  
RN 184953-11-5 CAPLUS  
CN Phosphonic acid, [1-[[2-[(1,2-diphosphonoethyl)amino]ethyl]amino]-1,2-ethenediyl]bis- (9CI) (CA INDEX NAME)

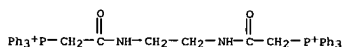


L22 ANSWER 10 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN  
AB In the title photog. material containing  $\geq 1$  neg. type Ag halide emulsion layer, a hydrazine derivative as nucleating agent and a nucleating

promoter are sep. contained in the different layers.  
ACCESSION NUMBER: 1995:680826 CAPLUS  
DOCUMENT NUMBER: 123:70228  
TITLE: Silver halide photographic material with super high-contrast and image formation  
INVENTOR(S): Sakai, Minoru  
PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 46 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07104420	A2	19950421	JP 1993-249433	19931005
PRIORITY APPLN. INFO.:			JP 1993-249433	19931005

IT 61214-05-9  
RL: DEV (Device component use); USES (Uses)  
(nucleating promoter for photog. material and image formation)  
RN 61214-05-9 CAPLUS  
CN 4,7-Diaza-1,10-diphosphoniadecane, 3,8-dioxo-1,1,1,10,10,10-hexaphenyl-, dichloride (9CI) (CA INDEX NAME)

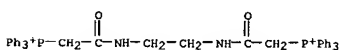


●2 Cl<sup>-</sup>

L22 ANSWER 11 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN  
AB In the photog. material consisting of  $\geq 3$  photosensitive non-photofogged internal-image Ag halide emulsion layers and  $\geq 1$  adjacent photo-insensitive layers laminated on a support, the photosensitive and/or photo-insensitive layers contains phosphonium compound  
(R11P-R12R13)mL11(m/n)X11n- [R11-13 = (substituted) alkyl, cycloalkyl, aryl, alkenyl, cycloalkenyl, heterocyclic; m = 1, 2; L11 = m valent organic residue; n = 1-3; X11 = anion]. The color image is formed by developing with a developer containing H2N(p-C6H4)NR1(R2OH) (R1 = alkyl; R2 = alkylene; R1 and R2 may form a ring). The color proof is manufactured from the photog. material by processing the color formation method.  
ACCESSION NUMBER: 1995:541631 CAPLUS  
DOCUMENT NUMBER: 123:22045  
TITLE: Direct positive color photographic material, color image forming method, and manufacture of color proof  
INVENTOR(S): Inoe, Akyuki; Sakai, Minoru; Okamura, Hisaashi; Kawamoto, Hiroyuki  
PATENT ASSIGNEE(S): Fuji Photo Film Co Ltd, Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 37 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

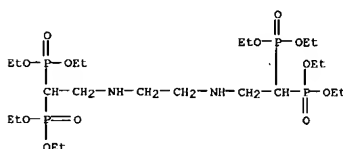
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07056291	A2	19950303	JP 1993-223818	19930817
PRIORITY APPLN. INFO.:			JP 1993-223818	19930817

OTHER SOURCE(S): MARPAT 123:22045  
IT 163716-73-2  
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
(direct pos. color photog. material for color proof)  
RN 163716-73-2 CAPLUS  
CN 4,7-Diaza-1,10-diphosphoniadecane, 3,8-dioxo-1,1,1,10,10,10-hexaphenyl-, dibromide (9CI) (CA INDEX NAME)



●2 Br<sup>-</sup>

L22 ANSWER 12 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN  
AB CH2:C[P(O)(OR)2]2 can undergo facile Michael type addition reaction with amines, alcs., water, amino acid, and spiroposphoranes bearing a P-H bond. The stability of these compds. was investigated and the reversibility of the reaction was demonstrated in the case of methylamine.  
ACCESSION NUMBER: 1994:605507 CAPLUS  
DOCUMENT NUMBER: 121:205507  
TITLE: NMR study of the addition of -NH-, -OH and P(V)-H groups to diethyl ethenylidenebisphosphonate. Synthesis of functionalized gem-bisphosphonates  
AUTHOR(S): Bailly, Theodorine; Burgada, Ramon  
CORPORATE SOURCE: Lab. Chim. Organoelements, Univ. Pierre Marie Curie, Paris, 75252, Fr.  
SOURCE: Phosphorus, Sulfur and Silicon and the Related Elements (1994), 86(1-4), 217-28  
CODEN: PSSLEC; ISSN: 1042-6507  
DOCUMENT TYPE: Journal  
LANGUAGE: French  
OTHER SOURCE(S): CASREACT 121:205507  
IT 121001-80-7P  
RL: SEN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 121001-80-7 CAPLUS  
CN Phosphonic acid, [1,2-ethanediybis(imino-2-ethanyl-1-ylidene)]tetrakis-, octaethyl ester (9CI) (CA INDEX NAME)

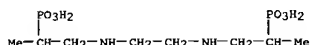


L22 ANSWER 13 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB The solns. comprise Au ion, complexing agent, reducing agent, and 21 of aminophosphoric acids, iminophosphoric acids, their Na salts, K salts, and NH<sub>4</sub> salts. The solns. are stable against dissoln. of Cu, Ni, Fe, etc.

ACCESSION NUMBER: 1992:219723 CAPLUS  
 DOCUMENT NUMBER: 116:219723  
 TITLE: Solutions for electroless coating of gold  
 INVENTOR(S): Okudaira, Hiroaki; Ando, Setsuo; Kashiwara, Takashi; Murayama, Nobuyasu; Shimazaki, Takeshi; Tomizawa, Akira  
 PATENT ASSIGNEE(S): Hitachi, Ltd., Japan; Hitachi Chemical Co., Ltd.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.  
 CODEN: JKXKAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03294484	A2	19911225	JP 1990-96461	19900413
PRIORITY APPLN. INFO.:			JP 1990-96461	19900413

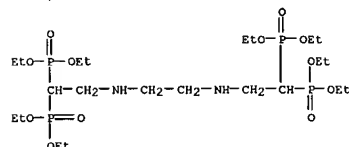
IT 141303-55-1  
 RL: USES (Uses)  
 (gold electroless coating baths containing)  
 RN 141303-55-1 CAPLUS  
 CN Phosphonic acid, [1,2-ethanediylbis(imino(1-methyl-2,1-ethanediyl))]bis- (9CI) (CA INDEX NAME)



L22 ANSWER 14 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Ethenyldienebisphosphonates [(RO)2P(O)12C:CH2 (R = Et, Me2CH), undergo facile Michael-type addition reactions with N, P, or S nucleophiles (but not with O or C nucleophiles) to give C-substituted methylenebisphosphonates, e.g., [(EtO)2P(O)12CHCH2R1 (R1 = SET, SP, SPh, etc.). In the case of S nucleophiles, the products can be readily isolated and de-esterified to give the corresponding bisphosphonic acids [(HO)2P(O)12CHCH2R1, which are potential inhibitors of the replication of influenza virus A.

ACCESSION NUMBER: 1989:497358 CAPLUS  
 DOCUMENT NUMBER: 111:97358  
 TITLE: Michael addition reactions of ethenyldienebisphosphonates  
 AUTHOR(S): Hutchinson, David W.; Thornton, David M.  
 CORPORATE SOURCE: Dep. Chem., Univ. Warwick, Coventry, CV4 7AL, UK  
 SOURCE: Journal of Organometallic Chemistry (1988), 346(3), 341-8  
 CODEN: JORCAI; ISSN: 0022-328X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 111:97358

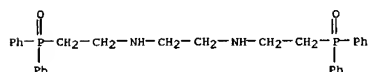
IT 121001-80-7P  
 RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)  
 RN 121001-80-7 CAPLUS  
 CN Phosphonic acid, [1,2-ethanediylbis(imino-2-ethanyl-1-ylidene)]tetrakis-, octaethyl ester (9CI) (CA INDEX NAME)



L22 ANSWER 15 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Complexing of Tl(I) semiquinolate with ethylenediamine and its neutral organophosphoryl derivs. in CHCl<sub>3</sub> was studied by ESR. Thermodyn. and kinetic parameters were calculated for complex formation.

ACCESSION NUMBER: 1989:83109 CAPLUS  
 DOCUMENT NUMBER: 110:83109  
 TITLE: Thermodynamics and kinetics of complexation of thallium 3,6-di-tert-butylorthobenzoquinolates with some complex-forming reagents  
 AUTHOR(S): Prokof'ev, A. I.; Shcherbakov, B. K.; Malysheva, N. A.; Bubnov, N. N.; Solodovnikov, S. P.; Polikarpov, Yu. M.; Kabachnik, M. I.  
 CORPORATE SOURCE: Inst. Elementoorg. Soedin., Moscow, USSR  
 SOURCE: Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1988), (9), 2074-80  
 CODEN: IASKA6; ISSN: 0002-3353  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian

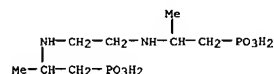
IT 68745-31-3DP, thallium(I) complexes  
 RL: FORM (Formation, nonpreparative); PREP (Preparation) (formation of, in chloroform, ESR study of)  
 RN 68745-31-3 CAPLUS  
 CN 1,2-Ethanediylamine, N,N'-bis[2-(diphenylphosphinyl)ethyl]- (9CI) (CA INDEX NAME)



L22 ANSWER 16 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB The decorporation of 110mAgg, 60Co, and 58Co from organs of white rats by various chemical agents was investigated. The most effective agents for 110mAg decorporation were thiols, penicillamine, and diene, whereas for radiocobalt, DTPA and related compds. were most effective. Ferrocene was quite efficient in radiocobalt desorption from the digestive tract. The effectiveness of the tested compds. depended in part on the form in which the nuclides were administered.

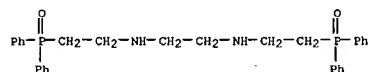
ACCESSION NUMBER: 1988:127678 CAPLUS  
 DOCUMENT NUMBER: 108:127678  
 TITLE: Effect of some chemical agents on the level of accumulation of radioactive silver and cobalt in the body of rats  
 AUTHOR(S): Ivannikov, A. T.; Tikhonova, L. I.; Borisov, V. P.; Popov, B. A.; Razumovskii, N. O.  
 CORPORATE SOURCE: USSR  
 SOURCE: Rep. Staatl. Amtes Atomsicherh. Strahlenschutz DDR (1986), SAAS-343, 45-52  
 CODEN: RSADDL; ISSN: 0138-2551  
 DOCUMENT TYPE: Report  
 LANGUAGE: Russian

IT 108703-57-7  
 RL: BIOL (Biological study) (cobalt radioisotopes and silver-110m decorporation by)  
 RN 108703-57-7 CAPLUS  
 CN Phosphonic acid, [1,2-ethanediylbis(imino(2-methyl-2,1-ethanediyl))]bis-, disodium salt (9CI) (CA INDEX NAME)



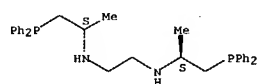
● 2 Na

L22 ANSWER 17 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Complexation of Co(NCS)2 and Co(NCS)42- with neutral phosphoryl ligands was studied as a function of ligand donor group number and nature.  
 General trends were identified. The ion Co(NCS)42- only reacts with phosphoryl ligands with replacement of SCN- when the entering ligands are at least quadridentate.  
 ACCESSION NUMBER: 1987:484822 CAPLUS  
 DOCUMENT NUMBER: 107:84822  
 TITLE: Reaction of cobalt(III) thiocyanate with some phosphoryl-containing ligands  
 AUTHOR(S): Sinyavskaya, E. I.; Konstantinovskaya, M. A.; Yatsimirskii, K. B.  
 CORPORATE SOURCE: Inst. Fiz. Khim., Kiev, USSR  
 SOURCE: Zhurnal Neorganicheskoi Khimii (1987), 32(5), 1123-8  
 CODEN: ZNOKAQ; ISSN: 0044-457X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 68745-31-3  
 RL: PRP (Properties)  
 (interaction of with cobalt thiocyanate complexes)  
 RN 68745-31-3 CAPLUS  
 CN 1,2-Ethanediamine, N,N'-bis[2-(diphenylphosphinyl)ethyl]- (9CI) (CA INDEX NAME)



L22 ANSWER 18 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB Two new optically quadridentate phosphine ligands, (3S,8S)-3,8-dimethyl-1,1,10,10-tetraphenyl-4,7-diaza-1,10-diphosphadecanes (SS-Me2-pp-PNPNP) and (4S,9S)-2,4,9,11-tetramethyl-5,8-diaza-2,11-diphosphadecane (SS-Me2-mm-PNPNP) and their cobalt(III) complexes, trans-[CoCl2(SS-Me2-pp- or SS-Me2-mm-PNPNP)]2+, A-cis-β-[Co(acac)(SS-Me2-pp-PNPNP)]2+ (acac = 2,4-pentanedionate ion), A-cis-β-[Co(CO3)(SS-Me2-pp-PNPNP)]2+, and Δ- and Λ-cis-β-[Co(acac)(SS-Me2-mm-PNPNP)]2+ were prepared and characterized. The mol. structure and the absolute configuration of (+)589-A-cis-β-[Co(acac)(SS-Me2-mm-PNPNP)](ClO4)2·H2O were determined by x-ray anal. Three five-membered chelate rings in the complex form distorted gauche (δλλ) conformations, and the Me group on C of the apically linked chelate ring takes an axial disposition. Stereochem. of all the complexes was discussed on the basis of the NMR, absorption and CD spectra.  
 ACCESSION NUMBER: 1986:609029 CAPLUS  
 DOCUMENT NUMBER: 105:209029  
 TITLE: Preparation and stereochemistry of cobalt(III) complexes containing (3S,8S)-3,8-dimethyl-1,1,10,10-tetraphenyl-4,7-diaza-1,10-diphosphadecane or (4S,9S)-2,4,9,11-tetramethyl-5,8-diaza-2,11-diphosphadecane (SS-Me2-mm-PNPNP). Molecular structure of (+)589-A-cis-β-[Co(acac)(SS-Me2-mm-PNPNP)](ClO4)2·H2O (acac = C5H7O2)-  
 AUTHOR(S): Atoh, Masamichi; Kashiwabara, Kazuo; Fujita, Junnosuke  
 CORPORATE SOURCE: Fac. Sci., Nagoya Univ., Nagoya, 464, Japan  
 SOURCE: Bulletin of the Chemical Society of Japan (1985), 58(12), 3492-9  
 CODEN: BCSJAB; ISSN: 0009-2673  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 105:209029  
 IT 104690-03-1P 104690-04-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and reaction with cobalt complexes)  
 RN 104690-03-1 CAPLUS  
 CN 1,2-Ethanediamine, N,N'-bis[2-(diphenylphosphino)-1-methylethyl]-, (S-(R\*,R\*))-(9CI) (CA INDEX NAME)

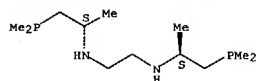
Absolute stereochemistry.



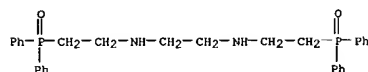
RN 104690-04-2 CAPLUS  
 CN 1,2-Ethanediamine, N,N'-bis[2-(dimethylphosphino)-1-methylethyl]-, (S-(R\*,R\*))-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

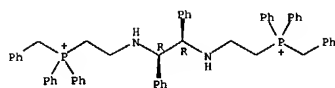
L22 ANSWER 18 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN (Continued)



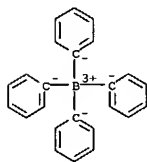
L22 ANSWER 19 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB 1,4,7,10-Tetrakis[(diphenylphosphinyl)ethyl]-1,4,7,10-tetraazacyclododecane (I) was prepared from 1,4,7,10-tetraazacyclododecane and Ph2(CH2:CH)PO in C6H6 at 160°. The equilibrium elec. conductivity of MOC6H3(NO2)2-2,4 (M = Li, Na, K, Cs) in the presence of I and the stability consts. of ML+ (L = I, Ph2P(O)(CH2)2NH(CH2)2NH(CH2)2P(O)Ph2, 5,5,7,12,12,14-hexamethyl-1,4,8,11-tetraazacyclotetradecane (Q), NH2CH2CH2NH2, and dibenzo-18-crown-6) were determined LiQ(OC6H3(NO2)2)2 was isolated. L coordinates to the alkali metals through the macrocyclic N atoms and the phosphinyl O atoms.  
 ACCESSION NUMBER: 1986:597990 CAPLUS  
 DOCUMENT NUMBER: 105:197990  
 TITLE: Reaction of alkali metal 2,4-dinitrophenolates with 1,4,7,10-tetrakis[(diphenylphosphinyl)ethyl]-1,4,7,10-tetraazacyclododecane  
 AUTHOR(S): Sinyavskaya, E. I.; Tsybmal, L. V.; Yatsimirskii, K. B.; Pisareva, S. A.; Medved, T. Ya.; Kabachnik, M. I.  
 CORPORATE SOURCE: Inst. Elementoorg. Soedin., Moscow, USSR  
 SOURCE: Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1986), (1), 176-81  
 CODEN: IASKA6; ISSN: 0002-3353  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 68745-31-3D, alkali metal complexes  
 RL: PRP (Properties)  
 (stability consts. of)  
 RN 68745-31-3 CAPLUS  
 CN 1,2-Ethanediamine, N,N'-bis[2-(diphenylphosphinyl)ethyl]- (9CI) (CA INDEX NAME)







CM 2  
CRN 4358-26-3  
CMF C24 H20 B  
CCI CCS



AB [Ph2P(O)(CH2)n(HO)2P(O)(CH2)nCH2]2 (1, n = 1, 2), derivs. of the title compound were prepared and then properties (pKa, complex formation) studied.

Thus, treating Ph2P(O)(CH2)2 with H2NCH2CH2NH2 gave [Ph2P(O)(CH2)2NHCH2]2 which on treatment with HCHO and H3PO3 gave I (n = 2).

ACCESSION NUMBER: 1981:533018 CAPLUS  
DOCUMENT NUMBER: 95:133018  
TITLE: Some derivatives of ethylenediaminobis(methylphosphonic acid)

AUTHOR(S): Medved, T. Ya.; Goryunova, I. B.; Bel'skii, F. I.; Kabachnik, M. I.  
CORPORATE SOURCE: Inst. Elementoorg. Soedin. im. Nesmeyanova, Moscow, USSR

SOURCE: Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1981), (3), 646-50  
CODEN: IASKA6; ISSN: 0002-3353

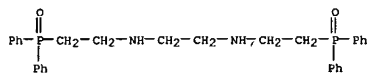
LANGUAGE: Russian  
OTHER SOURCE(S): CASREACT 95:133018

IT 68745-31-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, with formaldehyde and phosphonic acid)

RN 68745-31-3 CAPLUS

CN 1,2-Ethanediimine, N,N'-bis[2-(diphenylphosphinyl)ethyl]- (9CI) (CA INDEX NAME)



AB The preparation, anal., and biodistribution in expl. animals of various N-diphosphonates, labeled with 99mTc and 111In, are described. The biol. distribution of these complexes was studied in mice and compared with the bone scanning radiopharmaceuticals, 99mTc imidodiphosphate (IDP) and 111In

ethylenediaminetetremethylenephosphonate (EDTMP). The derivs. labeled with 99mTc showed low bone concentration compared with 99mTc-IDP. The In complexes presented higher bone values of activity, with 111In ethylenediamine-N,N'-dimethylenediphosphonate (EDDMP) exhibiting a quite satisfactory bone concentration, comparable with that of 111In-EDTMP.

EDDMP carried only 2 phosphonic groups, thus offering free sites for substitution, and may be evaluated as a basic structure for the production of

In radiopharmaceuticals.

ACCESSION NUMBER: 1982:468644 CAPLUS

DOCUMENT NUMBER: 97:68644

TITLE: Structure-activity relationships of technetium-99m- and indium-111-labeled N-diphosphonates

AUTHOR(S): Andreou, P.; Chiotellis, E.; Vaivargiou, A.;

Koutoulidis, C.

CORPORATE SOURCE: Nucl. Res. Cent. Democr., Radiopharm. Lab., Athens, Greece

SOURCE: Med. Radionuclide Imaging Proc. Int. Symp. (1981), Meeting Date 1980, Volume 1, 613-21. IAEA: Vienna, Austria.

CODEN: 48APAJ

DOCUMENT TYPE: Conference

LANGUAGE: English

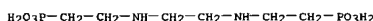
IT 60701-68-0D, indium-111 and technetium-99 complexes

RL: BIOL (Biological study)

(metabolism of metastable, scintigraphy in relation to)

RN 60701-68-0 CAPLUS

CN Phosphonic acid, [1,2-ethanedylbis(imino-2,1-ethanedyl)]bis- (9CI) (CA INDEX NAME)



AB The x-ray electronic spectra are reported of the amino-substituted phosphine oxides (I): bidentate (C6H5)nP(O)(CH2)2mNRn (n = 1,2; m = 2,1;

R : CH3, C2H5) and quadridentate

(C6H5)nP(O)(CH2)2mNH1(CH2)2pNH1(CH2)2mP(O)(

C6H5)n (n = 1,2; m = 2,1; p = 1,2; l = 1,0) and their complexes with Cu:

[CuL][CuCl4], CuL(C1O4)2, and Cu(OH)2(HL)2(C1O4)2. Information was

obtained regarding the character of the chemical bond in mols. of free

ligands. The binding energy was determined of the inner electrons of

ligand atoms (N1s, P2p, O1s), anions (Cl2p), and metal atoms (Cu2p3/2) in mols.

of complexes.

ACCESSION NUMBER: 1980:67345 CAPLUS

DOCUMENT NUMBER: 92:67345

TITLE: X-ray electronic spectra of amino-substituted

phosphine oxides and their complexes with copper(II)

Yatsimirskii, K. B.; Nemoshkalenko, V. V.; Aleshin,

V.

G.; Sinyavskaya, E. I.; Konstantinovskaya, M. A.;

Prokopenko, V. M.

CORPORATE SOURCE: Inst. Fiz. Khim. im. Pissarzhevskogo, Kiev, USSR

SOURCE: Teoreticheskaya i Eksperimental'naya Khimiya (1979),

15(5), 571-5

CODEN: TEKHA4; ISSN: 0497-2627

DOCUMENT TYPE: Journal

LANGUAGE: Russian

IT 68745-31-3

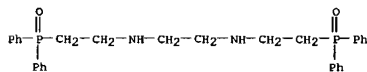
RL: PRP (Properties)

(x-ray photoelec. emission from)

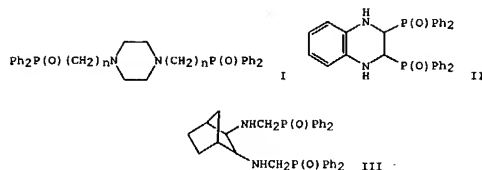
RN 68745-31-3 CAPLUS

CN 1,2-Ethanediimine, N,N'-bis[2-(diphenylphosphinyl)ethyl]- (9CI) (CA

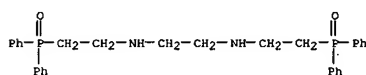
INDEX NAME)



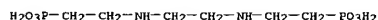




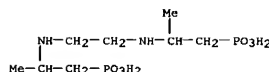
AB The title compds. I (n = 1, 2), II, III, [Ph<sub>2</sub>P(O)(CH<sub>2</sub>)<sub>n</sub>NHCH<sub>2</sub>]<sub>2</sub>Z (Z = p-C<sub>6</sub>H<sub>4</sub>, CH<sub>2</sub>CH<sub>2</sub>; n = 1, 2), etc. were prepared in 24-78% yields. Thus, refluxing (CH<sub>2</sub>)<sub>2</sub>Ph<sub>2</sub>PO with piperazine (2:1) in benzene gave 51% I.  
ACCESSION NUMBER: 1979:23183 CAPLUS  
DOCUMENT NUMBER: 90:23183  
TITLE: New polydentate amino-substituted derivatives of phosphine oxides  
AUTHOR(S): Polikarpov, Yu. M.; Shcherbakov, B. K.; Medved, T. Ya.; Kabachnik, M. I.  
CORPORATE SOURCE: Inst. Elementorg. Soedin., Moscow, USSR  
SOURCE: Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1978), (9), 2114-17  
CODEN: IASKA6; ISSN: 0002-3353  
DOCUMENT TYPE: Journal  
LANGUAGE: Russian  
IT 68745-31-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 68745-31-3 CAPLUS  
CN 1,2-Ethanediamine, N,N'-bis[2-(diphenylphosphinyl)ethyl]- (9CI) (CA INDEX NAME)



AB Saturated and unsatd. halogenated phosphates were condensed with primary diamines to give diamine diphosphates which were polycondensed with diisocyanates or bischloroformates to give polymers with pendent phosphate groups which had improved stability to hydrolysis. Alkene diamines were treated with β-unsatd. β-halo phosphonates and the diamine diphosphonates formed were hydrolyzed to ketophosphonates and hydrogenated to give diamine diphosphonates. Saturated halo phosphonates were condensed to give different diphosphonates and the product, in both cases, were condensed with toluene diisocyanate [26471-62-5] to give 90% yields of polyureas. β-Unsatd. γ-halo phosphonates were condensed with dialkylamines to give aminophosphonates and with the diamines to give an intermediate which was hydrogenated to the same product obtained in the saturated halo phosphonate reaction.  
ACCESSION NUMBER: 1977:453614 CAPLUS  
DOCUMENT NUMBER: 87:53614  
TITLE: Synthesis and polycondensation of diamine diphosphonates  
AUTHOR(S): Sturz, Georges; Clement, Jean Claude  
CORPORATE SOURCE: Lab. Chim. Hetero-Org., Univ. Bretagne Occident., Brest, Fr.  
SOURCE: Bulletin de la Societe Chimique de France (1976), (11-12, Pt. 2), 1837-8  
CODEN: BSCFAS; ISSN: 0037-8968  
DOCUMENT TYPE: Journal  
LANGUAGE: French  
IT 60701-68-0DP, alkyl esters  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and polycondensation of, with diisocyanates)  
RN 60701-68-0 CAPLUS  
CN Phosphonic acid, [1,2-ethanediyldis(imino-2,1-ethanediyl)]bis- (9CI) (CA INDEX NAME)



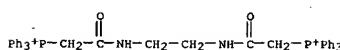
IT 63602-04-0DP, alkyl esters  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and polycondensation of, with isocyanates)  
RN 63602-04-0 CAPLUS  
CN Phosphonic acid, [1,2-ethanediyldis(imino(2-methyl-2,1-ethanediyl))]bis- (9CI) (CA INDEX NAME)



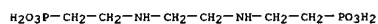
AB The reaction of Ph<sub>3</sub>P with chloromethyl compds. gave phosphonium chlorides, useful as colorfast agents in textiles against heat, light, and laundering. Thus, 2.2 g ClCH<sub>2</sub>CONHCH<sub>2</sub>CH<sub>2</sub>NHCOCH<sub>2</sub>Cl and 5.3 g Ph<sub>3</sub>P in 10 ml DMF was heated 3 hr to give 90% Ph<sub>3</sub>P+CH<sub>2</sub>CONHCH<sub>2</sub>CH<sub>2</sub>NHCOCH<sub>2</sub>P+Ph<sub>3</sub> 2Cl-. Along with 6 other compds. similarly prepared were 1,5-bis(triphenylphosphonio)-2,4-dimethylbenzene dichloride, 1,4-bis(triphenylphosphonio)acetyl)piperazine dichloride, and Ph<sub>3</sub>P+CH<sub>2</sub>CONH(CH<sub>2</sub>)<sub>6</sub>NHCOCH<sub>2</sub>P+Ph<sub>3</sub> 2Cl-.  
ACCESSION NUMBER: 1977:5627 CAPLUS  
DOCUMENT NUMBER: 86:5627  
TITLE: Bis(triarylphosphonium salts)  
INVENTOR(S): Fusco, Raffaello  
PATENT ASSIGNEE(S): Anic S.p.A., Italy  
SOURCE: Ger. Offen., 12 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2603869	A1	19760805	DE 1976-2603869	19760202
IT 1031432	A	19790430	IT 1975-19916	19750203
GB 1521333	A	19780816	GB 1976-3871	19760130
BE 838174	A1	19760802	BE 1976-164010	19760202
FR 2299342	B1	19790202	FR 1976-2790	19760202
CH 625533	A	19810930	CH 1976-1233	19760202
NL 7601095	A	19760805	NL 1976-1095	19760203
NL 171827	B	19821216		
NL 171827	C	19830516		
JP 51101957	A2	19760908	JP 1976-10066	19760203
PRIORITY APPL. INFO.:			IT 1975-19916	19750203

IT 61214-05-9P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)  
RN 61214-05-9 CAPLUS  
CN 4,7-Diaza-1,10-diphosphoniadecane, 3,8-dioxo-1,1,1,10,10,10-hexaphenyl-, dichloride (9CI) (CA INDEX NAME)



L22 ANSWER 30 OF 30 CAPLUS COPYRIGHT 2004 ACS on STN  
 AB (HO)2P(O)2NRCH2CH2RN2P(O)(OH)2 (I, R=H, Me; Z = CH2, CH2CH2, CMe2) were  
 prepared and their pKa and complexation properties with metals (Ca2+,  
 Ni2+, Cu2+, UO22+, Dy3+, Fe2+) were determined Thus, condensation of  
 MeNHCH2CH2NHMe  
 with HCHO and (EtO)2POH at 90-5° 2.5-3 hr gave 60% tetra-Et ester  
 of I (R = Me, Z = CH2) which on HCl hydrolysis gave the corresponding  
 acid (83%).  
 ACCESSION NUMBER: 1976:524043 CAPLUS  
 DOCUMENT NUMBER: 85:124043  
 TITLE: Synthesis and complexing properties of N-methylated  
 ethylenediamino-N,N'-dimethyl- and  
 ethylenediamino-N,N'-diethyldiphosphonic acids  
 AUTHOR(S): Medved, T. Ya.; Dyatlova, N. M.; Markhaeva, V. P.;  
 Rudomino M. V.; Churilina, N. V.; Polikarpov, Yu. M.;  
 Kabachnik, M. I.  
 CORPORATE SOURCE: Inst. Elementoorg. Soedin., Moscow, USSR  
 SOURCE: Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya  
 (1976), (5), 1018-23  
 CODEN: IASKA6; ISSN: 0002-3353  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 IT 60701-68-0P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation and complexation with metals)  
 RN 60701-68-0 CAPLUS  
 CN Phosphonic acid, [1,2-ethanediy]bis(imino-2,1-ethanediy)]bis- (9CI) (CA  
 INDEX NAME)



=> logoff y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

145.00

2034.87

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

-21.00

-181.30

STN INTERNATIONAL LOGOFF AT 19:01:04 ON 30 SEP 2004